

NEBRASKA CENTER FOR JUSTICE RESEARCH

EXAMINING THE EFFECTS OF NEBRASKA'S GOOD TIME LAWS

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The Nebraska Center for Justice Research (NCJR) was established in 2014 by LB 907. The Center's mission is to develop and sustain research capacity internal to the State of Nebraska, assist the Legislature in research, evaluation, and policymaking to reduce recidivism, promote the use of evidence-based practices in corrections, and improve public safety. Questions regarding the NCJR should be directed to Dr. Ryan Spohn, Director, Nebraska Center for Justice Research, University of Nebraska, Omaha, 6001 Dodge Street, Omaha, NE 68182-0310. Phone: 402-554-3794; e-mail: rspohn@unomaha.edu. Questions concerning this report should be directed to Dr. Benjamin Steiner, School of Criminology and Criminal Justice, University of Nebraska, Omaha, 6001 Dodge Street, 218 CPACS, Omaha, NE 68182-0149. Phone: 402-554-4057; e-mail: bmsteiner@unomaha.edu.

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EXECUTIVE SUMMARY

Sentencing credit laws provide opportunities for inmates to gain a reduction in their prison sentence, and such laws have at least four intended goals: 1) reducing prison populations; 2) promoting prosocial behavior during imprisonment by offering inmates incentive for good behavior and/or deterring them from engaging in antisocial behavior; 3) reducing recidivism by providing offenders incentive for good behavior and participation in rehabilitative programming; and, 4) lowering correctional costs (Lawrence & Lyons, 2011; Weisburd & Chayet, 1989).

The state of Nebraska currently has a sentencing credit law that automatically awards good time credits to inmates. The study described in this report involved an examination of the administration and effects of the state of Nebraska's good time law. The specific research questions that were addressed included:

1. What are the relative effects of incident characteristics (e.g., type of violation) and inmate characteristics (e.g., age) on prison officials' decisions to remove good time credits?
2. What is the effect of losing good time credits on inmates' subsequent misconduct?
3. What is the effect of losing good time credits on inmates' odds of recidivism?

Methods

The data used for the study were based on official records that were provided by the Nebraska Department of Correctional Services (NDCS). Research questions 1 and 2 were addressed using data from sub-samples of all of the inmates admitted to a NDCS prison in fiscal year 2009. Research question 3 was addressed using data from a sub-sample of all of the inmates released from a NDCS prison during fiscal year 2011. The data pertaining to research question 1 were analyzed using hierarchical Bernoulli regression, whereas the data used for research questions 2 and 3 were analyzed by first creating matched samples of inmates who lost good

time and inmates who did not lose good time, and then, comparing the respective rates of misconduct (research question 2) and recidivism (research question 3) for the two groups.

Results

Approximately 74% of the inmates admitted to prison in 2009 were convicted of at least one rule infraction during their term of imprisonment (median = 4). Good time credits were removed in response to 6% of the rule violations committed by these inmates. However, 19% of inmates who were convicted of a rule violation lost good time in response to a violation; 42% of those inmates lost good time in response to more than one violation.

Factors Related to Prison Officials' Decisions to Remove Good Time Credits. The analyses pertaining to research question 1 revealed that prison officials were more likely to consider characteristics of the rule violation incidents that inmates were convicted of rather than the characteristics of the inmates when making their decisions to remove good time. The strongest predictors of prison officials' decisions to remove good time credits included legally relevant criteria reflecting the type (i.e., violent, tattoo) and seriousness (i.e., Class I) of the rule violation, along with the inmate's prior violation history.

Effects of Losing Good Time Credits on Subsequent Misconduct. The analyses related to research question 2 uncovered that losing good time had no effect on whether inmates committed subsequent misconduct in general, but inmates who lost good time were more likely to perpetrate additional violent misconduct.

Effects of Losing Good Time Credits on Recidivism. The analyses related to research question 3 revealed that losing good time credits amplified offenders' odds of recidivism, particularly among offenders who lost good time, but had some or all of their good time restored.

INTRODUCTION

Sentencing credit laws provide opportunities for inmates to gain a reduction in their prison sentence (Lawrence & Lyons, 2011; Weisburd & Chayet, 1989). By 2011, such laws existed in 44 states and generally took on one of two forms—good time or earned time credits (Lawrence & Lyons, 2011). Good time credits are typically awarded to inmates automatically if they follow prison rules and participate in required activities, whereas earned time credits are generally only awarded to inmates who participate in or complete designated programs (e.g., education courses, rehabilitative treatment) (Lawrence, 2009). Good time credits are awarded in 32 states, while earned time credits are available in 37 states; many states award both types of sentencing credits (Lawrence & Lyons, 2011).

Sentencing credit laws have at least four intended goals: 1) reducing prison populations; 2) promoting prosocial behavior during imprisonment by offering inmates incentive for good behavior and/or deterring them from engaging in antisocial behavior; 3) reducing recidivism by providing offenders incentive for good behavior and participation in rehabilitative programming; and, 4) lowering correctional costs (Johnson & Stageberg, 2014; Lawrence & Lyons, 2011; Weisburd & Chayet, 1989). To date, there have been very few studies of the effects of sentencing credit laws.

The state of Nebraska currently has a sentencing credit law that automatically awards good time credits to inmates. Since its inception, Nebraska's good time law has been the subject of considerable debate among the state's elected officials, justice system personnel, and citizens, but this debate has not been informed by scientific evidence. The purpose of the study described in this report is to inform the legislature regarding the effects of Nebraska's good time law. Specifically, we examine the factors that influence prison officials' decisions to remove good

time credits and the effects of losing good time on offenders' subsequent antisocial behavior while in prison and after their release.

NEBRASKA'S GOOD TIME LAWS

Nebraska's good time law has undergone a number of revisions in the past several decades, such that there are currently six separate active laws governing the release of inmates who have been sentenced to prison in Nebraska [i.e., Legislative Bill (LB) 567, LB 1307, LB 2926, LB 816, LB 364, and LB 191]. The most significant revision—LB 816—occurred during the 1992 legislative session. LB 816 consolidated and modified the existing laws governing good time, and provided that most inmates are automatically awarded six months of good time per year.¹ In effect, then, LB 816 halves the sentence length of individuals sentenced to prison (e.g., individuals sentenced to serve a minimum of 20 years in prison would serve 10 years if they were granted parole).

In 2011, the legislature passed LB 191, which allows inmates who have served a year in prison and complied with the inmate rules and regulations of the Nebraska Department of Correctional Services (NDCS) to earn three additional days of good time per month (beyond the six months per year already granted).² Good time earned pursuant to LB 191 cannot be removed.

Inmates can have good time removed pursuant to disciplinary actions for violations of the NDCS inmate rules and regulations (misconduct). All prisons in Nebraska prohibit 46 acts, which are divided into three different classes of offenses—Class I offenses (e.g., assault), Class II offenses (e.g., tattoo activities), and Class III offenses (e.g., tobacco products)—that reflect their seriousness and the maximum punishment that may be imposed. Inmates found guilty of a

¹ Individuals sentenced to a mandatory minimum prison term are not eligible to receive good time until the mandatory portion of their sentence has expired.

² Inmates are awarded three days of good time on the first day of each month following a twelve-month period of incarceration within the NDCS during which the offender has not been found guilty of a Class I or Class II offense or more than three Class III offenses as defined in the NDCS inmate rules and regulations.

Class I offense may lose up to two years of good time, whereas inmates found guilty of violating a Class II offense may lose up to three months of good time, and inmates found guilty of a Class III offense may lose up to two months of good time (NDCS, 2013).³

A disciplinary hearing must be conducted in order for an inmate to lose good time. After a misconduct report is written, inmates receive notice of the hearing and the charges against them. Hearings are expected to be held within seven days of the alleged rule violation, and inmates are allowed to be present at the hearings. After the hearing, inmates are provided with a written statement of the decision(s). Wardens typically review all decisions made by the disciplinary committees, and may modify or decrease the severity of the imposed sanctions (NDCS, 2013).

Inmates who have lost good time pursuant to disciplinary actions can also have good time restored.⁴ Eligible inmates include those that are free of any Class I offenses for a year, any other major misconducts for the past six months, and have no more than two minor misconducts within the past six months. Wardens may approve the restoration of up to 30 days of good time for every continuous 30-day period an inmate maintains a clear record, provided he/she has met the stipulations outlined above. Inmates must also request the restoration of each 30-day increment. Good time may also be restored in amounts exceeding 30 days, provided the inmate has met the stipulations outlined above and such restoration is recommended by the Warden. The approval of the Director is also required for restoration amounts that exceed 30 days (NDCS, 2014).

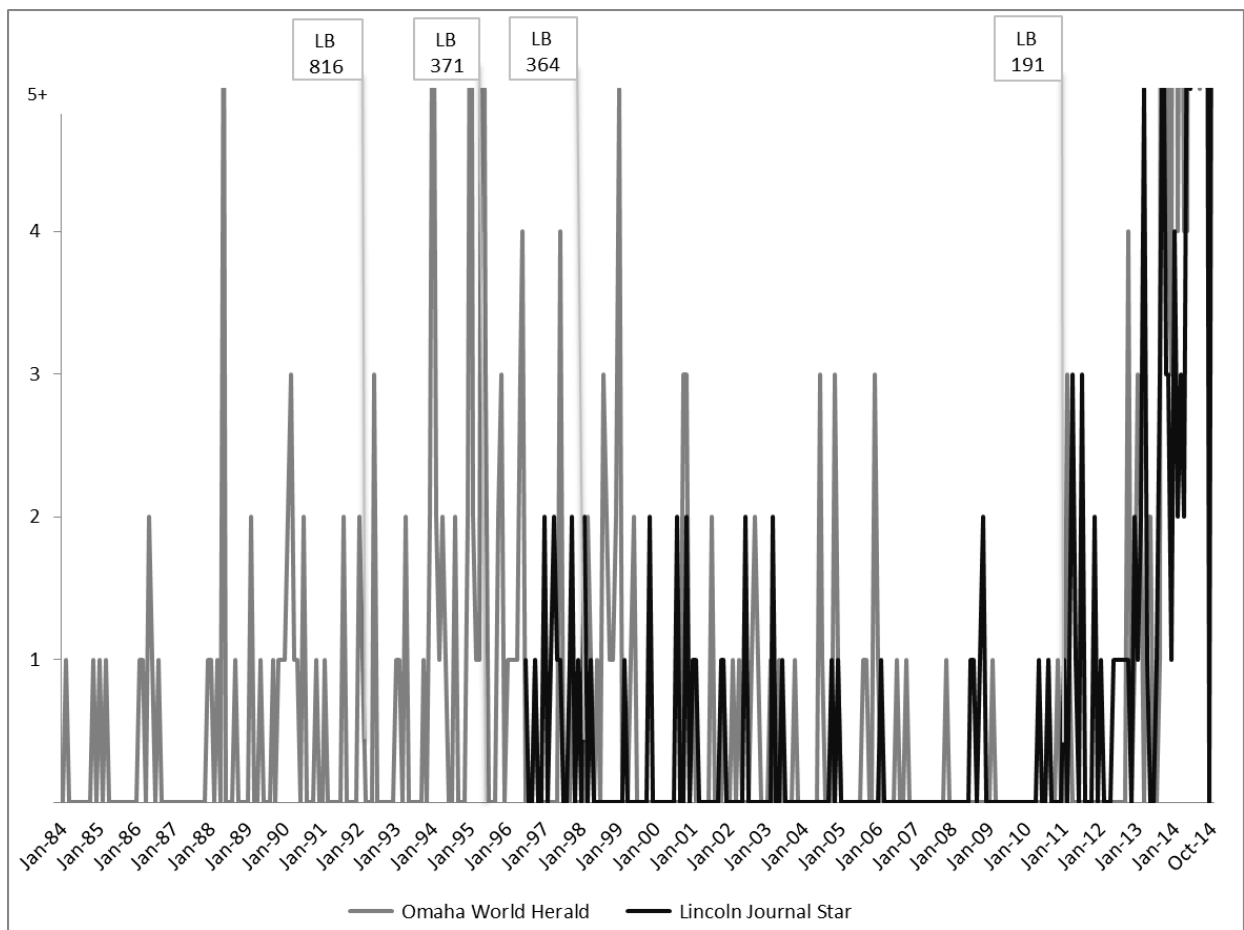
Nebraska's good time law has been the subject of significant debate among the state's elected officials, justice system personnel, and citizens. As evidence, Figure 1 depicts the trend lines of articles pertaining to the good time laws that have been published in the state's two largest

³ Loss of good time may not exceed six months for Class I offenses not involving assault or injury to a person.

⁴ Prison disciplinary committees may designate good time removed in response to a conviction for assault or injury to a person as non-restorable.

newspapers—the Omaha World Herald and the Lincoln Journal Star—since 1984.⁵ During the periods depicted in Figure 1, there were 357 articles concerning the good time laws published in the Omaha World Herald and 141 articles that were published in the Lincoln Journal Star. Both papers devoted approximately an article per month to this issue, though a considerable number of articles were published during some months (e.g., the World Herald published 33 articles in October of 2014), whereas neither paper published an article during most of the months included in Figure 1 (≈ 69 percent). It is also worth noting that the Nebraska legislature has modified the law governing good time four times during the last three decades.

Figure 1. Articles Related to Nebraska’s Good Time Laws Published between 1984 and 2014



⁵ Articles were identified via keyword searches using combinations of the terms good time, inmate, and prison. The Lincoln Journal Star did not commence publication until July of 1996.

EMPIRICAL EVIDENCE CONCERNING SENTENCING CREDIT LAWS

Sentencing credit laws exist in most states (Lawrence & Lyons, 2011), but there have been few studies of the administration of these laws and/or their effects (Parisi & Zillo, 1983; Weisburd & Chayet, 1989). Scientific inquiry regarding sentencing credit laws can be placed into three categories; 1) studies of the factors that influence the loss (or award) of sentencing credits; 2) studies of the effects of changes in sentencing credit laws on offender behavior; and, 3) studies of the effects of losing (or earning) sentencing credits on offender behavior.⁶

We are unaware of any studies of the factors that influence corrections officials' decisions to award or remove sentencing credits. However, prison disciplinary committees are responsible for removing sentencing credit laws in most states (including Nebraska), and the prison disciplinary process is, in many respects, similar to the criminal sentencing process. Thus, we inform our expectations regarding the factors that influence prison disciplinary decisions by drawing from the more extensive empirical literature concerning judicial sentencing decisions. In studies of judicial decision making, researchers have found that legally relevant factors account for most of the variation in sentencing decisions (e.g., Baumer, 2013; Bushway & Forst, 2013; Mitchell, 2005; Spohn, 2000). For prison disciplinary committees, legally relevant criteria include the type and severity of the infraction as well as the inmate's violation history and security risk (Howard, Winfree, Mays, Stohr, & Clason, 1994). In addition to legal factors, a number of scholars have found that extralegal factors such as defendants' race/ethnicity and sex also influence judicial sentencing decisions (e.g., Griffin & Wooldredge, 2006; Mitchell, 2005; Spohn 2000; Steffensmeier, Ulmer, & Kramer, 1998; Steffensmeier & Demuth, 2000). It could be that prison

⁶ Studies of accelerated release programs in which offenders are released from prison early to alternative sanction programs (e.g., electronic monitoring) or released early pursuant to selective awards of significant amounts of meritorious good time by prison or parole officials are not included here (e.g., Austin & Bolyard, 1993; Wright & Rosky, 2011; for a review of studies of such programs see Guzman, Krisberg, & Tsukida, 2008).

disciplinary committees also consider extralegal criteria such as an inmate's age, sex, race/ethnicity, family situation (e.g., children), or education level when deciding whether to remove sentencing credits. Finally, prison disciplinary committees might also face practical constraints pertaining to particular cases, such as an inmate's criminal history (e.g., past sexual offenses), mental health history, or the proportion of the inmate's sentence that has been served (see Steffensmeier et al., 1998 for a discussion of practical constraints in the context of judicial sentencing decisions).

Researchers who have assessed the effects of legislative changes in sentencing credit laws on offender behavior have typically compared the behavioral outcomes (e.g., inmate misconduct, recidivism) of offenders sentenced to prison after a change in a state's sentencing credit law to the outcomes of offenders sentenced to prison before the law was enacted. Any effects that are observed are referred to as general deterrent/incentive effects in the punishment literature, whereas observed effects are considered intent to treat effects in the program/policy evaluation literature [i.e., offenders in the treatment group are eligible to receive (or lose) the treatment (e.g., sentencing credits); not all offenders receive the treatment and/or equal dosages of the treatment, however].

Findings derived from studies that have assessed changes in sentencing credit laws on offender behavior are mixed, although it is important to note that there are considerable differences between the sentencing credit laws and respective change to the laws that have been evaluated. For instance, Emshoff and Davidson (1987) examined the effects of a change in a Michigan law which required offenders to serve their entire minimum sentence without receiving good time credits by comparing misconduct rates of eligible inmates sentenced after the law was enacted to misconduct rates for eligible inmates sentenced before the law was put in place.

Results were also contrasted against comparable groups of inmates not eligible to receive good time credits. Emshoff and Davidson (1987) found that the change in the law did not have a significant effect on rates of inmate misconduct or riot participation, but inmates who had been sentenced to prison after the law was put in place were involved in significantly fewer critical incidents. Drake, Barnoski and Aos (2009) evaluated a Washington law that increased earned release time for eligible non-violent offenders from 33% of the total sentence to 50% by comparing eligible offenders sentenced to prison after the passage of the law to a matched sample of offenders sentenced to prison before the law was put in place. They found no differences between the rates of violent felony recidivism for the two groups, but the offenders sentenced to prison after the law was enacted had a 3.5% lower rate of felony recidivism. Johnson and Stageberg (2014) compared misconduct rates for inmates imprisoned for Robbery 1 or 2 in Iowa to inmates charged with Robbery 1 or 2, but convicted of lesser offenses. Offenders convicted of Robbery 1 or 2 were required to serve 70% of the mandatory sentence before they were eligible to earn sentencing credits, whereas offenders convicted of lesser offenses were immediately eligible to earn 1.2 days off of their sentence for each day served. Johnson and Stageberg (2014) found that the two groups had very similar rates of misconduct during their first three years of their incarceration. Finally, other researchers have examined states' transitions to determinate sentencing schemes that also limited the opportunity for inmates' to earn sentencing credits. For example, Bales and Miller (2012) examined the effect of Florida's shift to determinate sentencing and truth in sentencing, which required offenders to serve 85% of the court imposed sentence without the opportunity to earn good time credits. They found that the inmates who were required to serve 85% of their sentence were more likely to commit violent, property, and disorderly infractions. Memory, Guo, Parker, and Sutton (1999) observed similar

findings based on their examination of the effects of North Carolina's shift to determinate sentencing.

Taken together, the evidence concerning the effects of changes in sentencing credit laws on offender behavior is too limited to draw meaningful conclusions. It is worth noting, however, that each of the studies discussed above revealed either improved behavioral outcomes (e.g., lower recidivism rates) for offenders eligible to receive sentencing credits or no difference in the behavioral outcomes of eligible offenders and the respective comparison group of offenders. Both of these outcomes (i.e., improved behavioral outcomes for eligible offenders, no differences in behavioral outcomes between eligible offenders and the respective comparison group) would result in reduced correctional costs, owing to the shorter prison stays for offenders eligible to receive sentencing credits.

As far as we are aware, there have been no studies of the effect of losing (or earning) sentencing credits on offender behavior.⁷ Theoretically, earning sentencing credits would promote prosocial behavior by rewarding inmates for demonstrating good behavior (e.g., participating in rehabilitative programming), whereas losing sentencing credits would specifically deter inmates from engaging in subsequent antisocial behavior (Weisburd & Chayet, 1989). Regarding specific deterrent effects, scholars have emphasized the importance of the certainty, celerity, and severity of sanctions. This is because estimates of the certainty that sanctions will be imposed and the severity of those sanctions form the basis for individual calculations of the costs versus the benefits of offending (Durlauf & Nagin, 2011; Nagin & Paternoster, 1993). The celerity with which sanctions are applied affects individuals' association

⁷ The study conducted by Drake et al. (2009) could be interpreted as an assessment of the effects of earning sentencing credits on offender behavior, but the researchers were unable to determine if all of the offenders in their sample earned additional release time. On average, however, inmates in their sample earned 60 additional days of release time [Drake (2014), personal communication].

of the sanction and related behavior (Taxman, Soule, & Gelb, 1999). Formal policy mandates that the certainty and celerity with which sanctions are typically applied within a prison are similar regardless of the type rule violation an inmate was convicted of, or the type of sanction imposed (e.g., NDCS, 2013). However, losing good time may be perceived as more severe than other sanctions that can be imposed (e.g., privilege restrictions). Thus, it is reasonable to expect that losing good time could deter inmates from engaging in subsequent misconduct, though, as noted above, there is no evidence to suggest this is the case.

All told, the evidence regarding sentencing credit laws is far too limited to draw conclusions. More research regarding the implementation and consequences of these laws is sorely needed. We add to this limited body of research here by examining the factors that influence Nebraska prison officials' decisions to remove good time and by determining the effects of losing good time on offenders' subsequent antisocial behavior while in prison and after their release.

RESEARCH QUESTIONS AND METHODS

The study described here was designed to evaluate the administration and effects of the state of Nebraska's good time laws. The specific research questions that were examined included:

1. What are the relative effects of incident characteristics (e.g., type of violation) and inmate characteristics (e.g., age) on prison officials' decisions to remove good time credits?
2. What is the effect of losing good time credits on inmates' subsequent misconduct?
3. What is the effect of losing good time credits on inmates' odds of recidivism?

Data

All of the data used for the study were based on official records that were provided by the NDCS. Each of the research questions described above required the examination of different inmate samples and different pieces of information concerning those inmates. Research questions

1 and 2 were addressed using information pertaining to sub-samples (detailed below) of all of the inmates admitted to a NDCS prison in fiscal year 2009 ($N = 1,916$).⁸ For research question 3, we used data from a sub-sample (detailed below) of all of the inmates released from a NDCS prison during fiscal year 2011 ($N = 3,061$).⁹

In order to assess the factors that influence prison officials' decisions to remove good time (research question 1), we restricted the analysis to inmates admitted to prison in 2009 who were convicted of a prison rule violation (misconduct) during their first five years of confinement or their entire term of imprisonment if they served less than five years ($N = 1,410$).¹⁰ The examination of the effect of losing good time credits on inmates' subsequent misconduct (research question 2) involved comparing inmates admitted to prison during 2009 who were convicted of a rule violation and lost good time during their first year of imprisonment ($N = 183$) to inmates who were convicted of a rule violation and did not lose good time during their first year of imprisonment ($N = 1,106$). The decision to limit the analyses related to research question 2 to only inmates who were convicted of a rule violation in their first year of imprisonment was based on the need for an adequate follow-up period to assess whether losing good time had an effect on inmates' subsequent prison behavior [i.e., most individuals admitted to prison in Nebraska during 2009 served less than two years in prison (71%)]. Additionally, the majority of inmates who committed a rule violation (91%) and the majority of inmates who lost good time (70%) did so during their first year of imprisonment.

Finally, we assessed the effect of losing good time credits on inmates' odds of recidivism (research question 3) by comparing inmates released from prison during 2011 who lost good

⁸ Inmates were removed from the sample if they had served their entire sentence in a local jail, were sentenced to life in prison, or were transferred to/from another jurisdiction ($N = 153$).

⁹ Inmates were removed from the sample if they were transferred to/from another jurisdiction ($N = 13$).

¹⁰ Approximately, 84% of the 1,410 inmates served less than five years in prison.

time during their incarceration ($N = 470$) to inmates released in 2011 who did not lose good time during their imprisonment ($N = 2,591$).

Measures

Given the differences between the samples used to answer each research question, the relevant samples and specific measures used in each analysis are described prior to the discussion of the results pertaining to each research question (Tables 1, 3, and 6, respectively). The outcome measure for research question 1 assessed whether an inmate *lost good time* pursuant to a disciplinary hearing for a rule violation. The outcome measures for research question 2 included the prevalence and incidence of *any misconduct*, *Class I misconduct*, or *violent misconduct* that an inmate committed after their first year of imprisonment.¹¹ Both the prevalence and incidence of misconduct were examined in order to determine whether losing good time was more relevant for understanding the frequency with which an inmate engaged in subsequent misconduct relative to whether they simply engaged in subsequent misconduct. Violent misconduct and Class I misconduct were examined separately from any misconduct in order to assess whether losing good time had an effect on an inmate's subsequent serious offending in prison, as opposed to just subsequent offending. Finally, the outcome measures for research question 3 included whether offenders were *reincarcerated* within two years of their release and whether they were *reincarcerated for a new offense* within two years of their release.

The decisions to use reincarceration and a two year follow-up period to measure recidivism were dictated by the data available from NDCS. Reincarceration is technically an official measure of recidivism and therefore may underestimate offenders' actual offending behavior

¹¹ The distributions of the incidence of violent misconducts and the incidence of Class I misconducts were restricted to vary between 0 and 6, whereas the distribution of the incidence of misconducts was restricted to vary between 0 and 40. We restricted the distributions of these measures in order to capture more meaningful variation in these outcomes; less than 1% of the sample committed more than 6 violent misconducts or Class I misconducts, and only 2% of sample committed more than 40 misconducts.

(MacKenzie, Browning, Skroban, & Smith, 1999). Reincarceration is also potentially less valid than other official measures of recidivism (e.g., rearrest) because reincarceration requires more time and further procession in to the criminal justice system (Maltz, 1984). On the other hand, official measures of recidivism have been determined to be a valid indicator of offender behavior (Farrall, 2005), and the majority of offenders released from prison who recidivate, do so within the first year after their release (Langan & Levin, 2002). Nonetheless, the potential limitations of the measures of recidivism used here should be kept in mind when interpreting the findings.

The predictor variables included characteristics of the rule violations inmates' were convicted of, including dichotomous indicators of the type (*violent, drug, tattoo, sanction violation, or other nonviolent offense*) and seriousness (*Class I, Class II, or Class III*) of the violation, as well as whether the inmate was convicted of *multiple violations* stemming from the same incident. Nonviolent and Class III offenses were treated as the reference categories in the relevant analyses. We also included a measure of an inmates' *prior violation history* which was a count of the number of rule violations each inmate committed, that was weighted to reflect the seriousness of those offenses (i.e., Class I = 3, Class II = 2, Class I = 1). The natural log of this scale was taken in order to reduce the skew in the distribution. The other measures included an inmate's social demographics [*age, sex (female), race/ethnicity (black, Hispanic, Native American, other race/ethnicity, white), marital status (married), child(ren), and education (< GED, GED, high school diploma)*], *gang membership, mental health problems*, criminal history (*sexual offender, security risk, prior incarceration, incarcerated for violent offense*), as well as their sentence length (*minimum and maximum*) and *time served in prison*. The categories white and < GED were treated as the reference categories for the measures of race/ethnicity and education.

Most of the measures described above are intuitive, while a few require explanation. For instance, gang membership reflects self-reported gang membership at the time of imprisonment. Mental health problems measures if an inmate was placed in a mental health unit during their prison term. Security risk is based on the score derived from a NDCS classification instrument which ranges from zero to 40 and categorizes inmates into one of four risk levels. Lower scores reflect higher risk. Finally, it is worth noting that not all of the measures described above were included in each of the analyses described below, and, for some of the analyses, the measures reflect characteristics of incidents rather than offenders. Distinctions will be made clear prior to the discussion of the results of the analyses pertaining to each research question.

Analytical Plan

Each of the research questions described above required different analytical procedures. The first analysis involved the examination of the factors that influence whether prison officials removed good time credits in response to a prison rule violation (research question 1). The hierarchical data structure (rule violations nested within inmates) required the creation of a bi-level data set with rule violation incidents at level-1 and inmates at level-2. Among other things, creating the bi-level datasets allowed us to adjust for the correlated error among violation incidents nested within the same inmate (i.e., violations incidents and the corresponding responses from prison officials are not truly independent of the inmates who commit the violations) and base the hypothesis tests on the appropriate sample sizes (for violation incidents versus inmates).

The dichotomous outcome (lost good time) measure was analyzed using hierarchical Bernoulli regression in the software package HLM 7.1 (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2011). First, an unconditional model revealed significant variance in the loss of good

time across inmates. Next, random intercept models that included fixed effects of each of the level-1 predictor variables were estimated. In these models, the measures mental health problems and proportion time served were group mean centered to permit the examination of within individual changes in the effects of these offender attributes. By contrast, the legally relevant variables (e.g., prior misconduct history) were grand mean centered in order to control for their effects at level-1 as well as to adjust the level-1 intercepts for their effects. Last, the level-2 predictors were entered, permitting the examination of the main effects of the inmate characteristics on the level-1 intercepts. The level-2 analyses were estimated using the Empirical Bayes (EB) estimates of the level-1 intercepts because the reliability index for the level-1 intercept dipped below .3.

For the analyses pertaining to the examination of the effect of losing good time on inmates' subsequent misconduct (research question 2) and recidivism (research question 3), we used propensity score matching to develop control groups of offenders who were statistically equivalent to the inmates who received the treatment (i.e., lost good time credits). Propensity score matching is advantageous for generating control groups in order to estimate treatment effects when an experimental design is not possible (Guo & Fraser, 2010). An experimental design was not possible here because inmates cannot be randomly assigned to lose good time for legal and ethical reasons. For the analysis of subsequent misconduct (research question 2), we generated a matched sample of inmates who were found guilty of violating NDCS rules and regulations, but received an alternative sanction instead of losing good time. For the analysis of recidivism (research question 3), we developed a matched sample of offenders who were released from prison without having lost any good time.

The propensity score was created by first estimating a model of the odds of receiving the treatment (losing good time) that included all of the relevant covariates and then saving the estimated propensity score (i.e., the conditional probability of losing good time given the observed covariates). Treatment cases (i.e., inmates who lost good time) were then matched to the available control cases (i.e., inmates who committed a rule violation, but did not lose good time) using a one-to-one nearest neighbor matching algorithm. The two groups were then assessed for balance using the standardized bias statistic (Rosenbaum & Rubin, 1985). In situations where the covariates were imbalanced, we re-estimated the propensity score after adding interaction terms to the selection model until a propensity score was generated that could be used to achieve an acceptable level of balance across the treatment and control groups. These analyses were carried out using the software R via the SPSS 22.0 R-Plugin developed by Thoemmes (2012). After the two groups were balanced, treatment effects and standard errors of those estimates were estimated.

RESULTS

Tables 1 and 2 contain the findings from the analyses pertaining to research question 1. Tables 3, 4, and 5 include the results of the analyses concerning research question 2, whereas Tables 6, 7, and 8 contain the results of the analyses related to research question 3.

As discussed above, 1,916 inmates were admitted to NDCS custody in fiscal year 2009, and of those, 1,410 inmates (74%) were convicted of at least one rule infraction during their term of imprisonment (median = 4).¹² The characteristics of the 13,281 rule violation incidents and the 1,410 inmates who were convicted of them are described in Table 1. As can be seen from Table 1, inmates were typically convicted of nonviolent rule violations and rule violations designated

¹² Approximately 16% of the 1,410 inmates were still incarcerated at the time of the study. The analyses were restricted to rule violations these inmates were convicted of during their first five years of imprisonment.

as Class II or Class III offenses. Table 1 also shows that good time credits were removed in response to 6% of the rule violations for which these inmates were convicted. However, 19% of inmates who were convicted of a rule violation lost good time in response to at least one violation; 42% of those inmates lost good time in response to more than one violation. In cases in which good time credits were removed, prison officials typically removed increments of 15 (17%), 30 (42%), 45 (23%), or 90 (15%) days.

Factors Related to Prison Officials' Decisions to Remove Good Time Credits

The multivariate analysis of the effects of incident and inmate characteristics on corrections officials' decisions to remove good time credits (Table 2) revealed that inmates convicted of violent, tattoo, drug, and sanction violation offenses were more likely to lose good time than inmates found guilty of nonviolent offenses. Corrections officials also removed good time credits more frequently for inmates found guilty of Class I and Class II offenses compared to inmates convicted of Class III offenses. Inmates with a more significant prior violation history, in terms of the frequency and severity of prior violations, and inmates with a greater security risk were also more likely to lose good time. In contrast, corrections officials were less likely to remove good time credits for violations perpetrated by inmates with mental health problems or inmates who had served a greater proportion of their sentence. Convictions for multiple violations stemming from the same incident did not impact whether inmates lost good time. Altogether, the significant incident-level characteristics explained 32% of the within-inmate variation in the loss of good time, and the compositional effects of the incident characteristics accounted for 26% of the between inmate variation in the rate of good time lost.

Table 1. Description of Samples of Rule Violation Incidents and Inmates who Committed Rule Violations

Measures	Mean	(SD)	Range
<i>Outcome</i>			
Lost good time	.06	(.24)	0 – 1
<i>Incident level</i>			
Offense type			
Violent	.07	(.25)	0 – 1
Tattoo	.02	(.14)	0 – 1
Drug	.05	(.22)	0 – 1
Sanction violation	.15	(.36)	0 – 1
Other non-violent ¹	.71	(.45)	0 – 1
Offense severity			
Class I	.08	(.27)	0 – 1
Class II	.50	(.50)	0 – 1
Class III ¹	.42	(.49)	0 – 1
Multiple violations	.09	(.29)	0 – 1
Natural log prior misconduct history	3.74	(2.76)	0 – 11.25
Security risk	22.82	(6.10)	3 – 43
Mental health problems	.01	(.11)	0 – 1
Proportion sentence served	.37	(.26)	0 – 1
$N_1 =$	13,281		
<i>Inmate level</i>			
Age	36.74	(10.79)	20 – 93
Female	.13	(.34)	0 – 1
Race/ethnicity			
Black	.25	(.44)	0 – 1
Hispanic	.14	(.34)	0 – 1
Native American	.05	(.21)	0 – 1
Other race/ethnicity	.01	(.12)	0 – 1
White ¹	.55	(.50)	0 – 1
Married	.21	(.41)	0 – 1
Child(ren)	.66	(.47)	0 – 1
Education			
High school diploma	.26	(.44)	0 – 1
GED	.34	(.47)	0 – 1
< GED ¹	.40	(.49)	0 – 1
Gang membership	.10	(.30)	0 – 1
Sex offender	.11	(.32)	0 – 1
Prior incarceration	.30	(.46)	0 – 1
Incarcerated for violent offense	.37	(.48)	0 – 1
$N_2 =$	1,916		

Note: ¹ = reference category

At the inmate-level, the characteristics that impacted the odds that inmates lost good time included sex, high school diploma, and gang membership. Specifically, female inmates and inmates who had earned a high school diploma were less likely to lose good time, whereas corrections officials were more likely to remove good time in cases involving gang members. None of the other inmate-level characteristics impacted the odds of losing good time. Moreover, the significant inmate-level predictors only accounted for 4% of the between inmate variation in the rate of good time lost.

In sum, our analyses of the factors that influence prison officials' decisions to remove good time credits revealed that prison officials were far more likely to consider characteristics of the incidents inmates were convicted of rather than characteristics related to the inmates when deciding whether to remove good time. Based on the odds ratios generated from the analyses, the strongest predictors of prison officials' decisions to remove good time credits included legally relevant criteria reflecting the type (i.e., violent, tattoo) and seriousness (i.e., Class I) of the rule violation, as well as the inmate's prior violation history. For instance, compared to inmates convicted of nonviolent rule violations, inmates convicted of violent misconducts had 627% higher odds of losing good time, whereas inmates convicted of tattoo related violations had 561% higher odds of losing good time. Inmates convicted of Class I offenses had 1,050% higher odds of losing good time relative to inmate convicted of Class III offenses. Each unit increase inmates accrued on the prior violation history scale was associated with an 18% increase in the odds they lost good time. For instance, inmates who appeared before the prison disciplinary committee and had previously committed two Class II offenses and two Class I offense had 90% higher odds of losing good time relative to inmates who appeared before the committee having only committed one Class I offense.

Table 2. Hierarchical Bernoulli Model of Corrections Officials Decisions to Remove Good Time Credits (standard errors in parentheses)

	<i>b</i>	<i>SE</i>
Intercept	-3.58	(.07)
<i>Incident level</i>		
Offense type		
Violent	1.99*	(.12)
Tattoo	1.89*	(.18)
Drug	.87*	(.16)
Sanctions violation	.70*	(.18)
Offense severity		
Class I	2.44*	(.18)
Class II	.93*	(.15)
Multiple violations	.19	(.12)
Natural log prior misconduct history	.16*	(.02)
Security risk	-.03*	(.01)
Mental health problems	-1.64*	(.58)
Proportion sentence served	-2.54*	(.29)
$N_1 =$	13,281	
Proportion variation within inmates explained	.32	
Proportion variation within inmates	.76	
<i>Inmate level</i>		
Age	-.001	(.001)
Female	-.12*	(.03)
Race/ethnicity		
Black	-.03	(.02)
Hispanic	-.03	(.03)
Native American	.06	(.04)
Other race/ethnicity	-.01	(.07)
Married	-.02	(.02)
Child(ren)	-.01	(.02)
Education		
GED	-.01	(.02)
High school diploma	-.06*	(.02)
Gang membership	.10*	(.03)
Sex offender	-.02	(.03)
Prior incarceration	-.03	(.02)
Incarcerated for violent offense	-.004	(.02)
$N_2 =$	1,410	
Proportion variation between inmates explained by compositional effects	.26	
Proportion variation between inmates explained by inmate level effects	.04	
Proportion variation between inmates	.24	

Note: * = $p \leq .01$

Effects of Losing Good Time Credits on Subsequent Misconduct

As described above, the examination of the effects of losing good time on subsequent misconduct involved comparing the inmates who were convicted of a rule violation and lost good time during their first year of imprisonment to the inmates who were convicted of a rule violation, but received an alternative sanction (e.g., privilege restriction). The two groups are described in Table 3, along with the measures included in the analyses, and the significant differences that were observed between the groups. Table 3 shows that there were 1,289 inmates who were admitted to prison in 2009 that were convicted of a rule violation during their first year of imprisonment; 183 (14%) of these inmates lost good time in response to a rule violation.

Table 3 also shows that the inmates who lost good time were more likely to be younger, involved in a gang, classified higher risk, sentenced to longer terms of imprisonment, have an indication of mental health problems, have a more significant history of rule violations, and have served more time in prison compared to the inmates who did not lose good time. Also, the inmates who lost good time were less likely to be female, married, have children or a high school diploma, or have been incarcerated for drug or public order offenses compared to the inmates who did not lose good time. Based on the observed differences between the groups, it can be inferred that the inmates who lost good time were more at risk for subsequent misconduct than the inmates who did not lose good time. Failure to adequately control for these differences between the groups could have confounded the relationship between losing good time and subsequent misconduct.

The results of the propensity score matching analysis are contained in Table 4. After matching, we were able to achieve balance between the groups; such that, there were no significant differences between the inmates who lost good time and the matched sample of

inmates who did not lose good time. It is worth noting that achieving this level of balance is better than what would be expected had a randomized design been used ($p \leq .05$).

Table 3. Comparisons of Inmates who Lost Good Time during their First Year of Imprisonment versus Inmates who did not Lose Good Time during their First Year of Imprisonment

Measures	<u>Lost good time</u>		<u>No time lost</u>	
	Mean	(SD)	Mean	(SD)
Age	29.92	(7.66)	37.19*	(10.54)
Female	.00	(.00)	.16*	(.37)
Race/ethnicity				
Black	.32	(.47)	.25	(.44)
Hispanic	.14	(.35)	.14	(.35)
Native American	.06	(.24)	.04	(.20)
Other race/ethnicity	.00	(.00)	.02	(.13)
Married	.10	(.30)	.22*	(.42)
Child(ren)	.53	(.50)	.67*	(.47)
Education				
High school diploma	.11	(.31)	.27*	(.45)
GED	.36	(.48)	.34	(.47)
Gang membership	.25	(.43)	.08*	(.28)
Sex offender	.09	(.28)	.10	(.31)
Prior incarceration	.26	(.44)	.30	(.46)
Incarcerated for property offense	.31	(.46)	.28	(.45)
Incarcerated for drug offense	.09	(.29)	.20*	(.40)
Incarcerated for public order offense	.10	(.30)	.18*	(.38)
Natural log minimum sentence length (months)	3.60	(1.07)	3.37*	(1.11)
Natural log maximum sentence length (months)	4.22	(.86)	3.99*	(.92)
Security risk	21.42	(4.78)	25.24*	(5.39)
Mental health problems	.05	(.22)	.01*	(.10)
Natural log prior misconduct history	2.54	(.71)	1.67*	(.72)
Time served in prison (months)	11.17	(2.01)	10.45*	(2.67)
N =	183		1,106	

Note: * = standardized bias statistic ≥ 20 .

Table 4. Comparisons of Inmates who Lost Good Time during their First Year of Imprisonment versus Inmates who did not Lose Good Time during their First Year of Imprisonment after Matching

Measures	<u>Lost good time</u>		<u>No time lost</u>	
	Mean	(SD)	Mean	(SD)
Age	29.92	(7.66)	30.09	(6.57)
Female	.00	(.00)	.00	(.00)
Race/ethnicity				
Black	.32	(.47)	.37	(.49)
Hispanic	.14	(.35)	.11	(.31)
Native American	.06	(.24)	.07	(.26)
Other race/ethnicity	.00	(.00)	.00	(.00)
Married	.10	(.30)	.11	(.32)
Child(ren)	.53	(.50)	.58	(.50)
Education				
High school diploma	.11	(.31)	.12	(.33)
GED	.36	(.48)	.39	(.49)
Gang membership	.25	(.43)	.23	(.42)
Sex offender	.09	(.28)	.10	(.31)
Prior incarceration	.26	(.44)	.30	(.46)
Incarcerated for property offense	.31	(.46)	.33	(.47)
Incarcerated for drug offense	.09	(.29)	.10	(.30)
Incarcerated for public order offense	.10	(.30)	.09	(.29)
Natural log minimum sentence length (months)	3.60	(1.07)	3.69	(1.09)
Natural log maximum sentence length (months)	4.22	(.86)	4.28	(.90)
Security risk	21.42	(4.78)	21.90	(4.22)
Mental health problems	.05	(.22)	.03	(.16)
Natural log prior misconduct history	2.54	(.71)	2.42	(.67)
Time served in prison (months)	11.17	(2.01)	11.31	(1.93)
N =	183		183	

Note: * = standardized bias statistic ≥ 20 .

The estimated average treatment effects (ATE) and corresponding standard errors are displayed in Table 5. Treatment effects reflect the differences of the means for the respective outcomes across the treatment group and matched control group.¹³ As can be seen from Table 5, losing good time had no effect on whether inmates committed subsequent misconduct, or the number of misconducts inmates committed. Similarly, we did not observe a significant

¹³ The distributions of the incidence outcomes reported in Table 5 are skewed, and so significance tests were performed after transforming the distributions of the original scales to negative binomial distributions.

difference in the odds inmates committed a Class I misconduct or the number of Class I misconducts committed for the inmates who lost good time versus the inmates who did not lose good time. Inmates who lost good time were more likely to perpetrate additional violent misconduct, however. Specifically, inmates who lost good time had a 9% higher probability of committing a violent misconduct, and also committed a higher number of violent offenses compared to inmates who did not lose good time.

Table 5. Effects of Losing Good Time during First Year of Imprisonment on Subsequent Misconduct

Outcomes	Lost good time		No time lost		ATE	(SE)
	Mean	(SD)	Mean	(SD)		
Prevalence						
Any misconduct	.73	(.45)	.74	(.44)	-.01	(.05)
Class I misconduct	.40	(.49)	.34	(.48)	.06	(.05)
Violent misconduct	.34	(.48)	.25	(.44)	.09*	(.05)
Incidence						
# of misconducts	9.72	(12.06)	9.07	(11.58)	.66	(1.24)
# of Class I misconducts	1.00	(1.58)	.80	(1.48)	.20	(.16)
# of violent misconducts	.77	(1.39)	.41	(.90)	.36*	(.12)
N =	183		183			

Note: * = $p \leq .05$.

We also repeated the analyses using only those inmates who lost good time and did not have any good time restored during their first year of imprisonment ($N = 176$). The results were substantively identical to those from the primary analysis. In sum, our analyses of the effect of losing good time on subsequent misconduct revealed that removing good time credits had no effect on inmates' subsequent misbehavior in general, but losing good time did amplify inmates' odds of engaging in subsequent violence in prison.

Effects of Losing Good Time Credits on Recidivism

As noted above, the analysis of losing good time on recidivism involved comparing the offenders released from prison who lost good time during their imprisonment to the offenders who were released from prison who did not lose good time during their imprisonment. Of the 3,061 offenders released from prison in 2011, 470 (15%) lost good time during their imprisonment. Table 6 describes the two groups, the measures included in these analyses, and the significant differences that were observed between the groups.¹⁴

Table 6 shows that the offenders who lost good time were more likely to be younger, involved in a gang, and classified higher risk compared to the offenders who did not lose good time. Offenders who lost good time were also more likely to have earned a GED, have an indication of mental health problems or a more significant history of rule violations, and have served a shorter period of time in prison relative to the offenders who did not lose good time. Further, the inmates who lost good time were also less likely to be female, have children or a high school diploma, or be incarcerated for drug or public order offenses compared to the offenders who did not lose good time. Based on the observed differences between the two groups, it can be inferred that the offenders who lost good time were more at risk for recidivism than the offenders who did not lose good time. Similar to the analysis of misconduct, then, failure to adequately control for the observed differences between the groups may have confounded the relationship between losing good time and recidivism.

¹⁴ The sample included 138 offenders who did not have a security risk assessment completed. We assessed 43 of these offenders using information available in the data files provided by NDCS. The remaining 95 offenders did not serve enough time in prison (< 3 months) to warrant the completion of a security risk assessment. The distribution of the prior violation history scale was restricted to vary between 0 and 70 in order to capture more meaningful variation in this measure; less than 2% of the offenders in the sample scored higher than 70 on the scale.

Table 6. Comparisons of Offenders who Lost Good Time during their Imprisonment versus Offenders who did not Lose Good Time during their Imprisonment

Measures	<u>Lost good time</u>		<u>No time lost</u>	
	Mean	(SD)	Mean	(SD)
Age at admission	26.50	(8.75)	32.92*	(10.65)
Age at release	31.14	(9.95)	34.57*	(10.88)
Female	.04	(.20)	.16*	(.37)
Race/ethnicity				
Black	.30	(.46)	.22	(.42)
Hispanic	.15	(.36)	.14	(.34)
Native American	.06	(.24)	.04	(.20)
Other race/ethnicity	.01	(.09)	.02	(.14)
Married	.18	(.39)	.24	(.43)
Child(ren)	.53	(.50)	.67*	(.47)
Education				
High school diploma	.17	(.38)	.28*	(.45)
GED	.42	(.49)	.28*	(.45)
Gang membership	.15	(.36)	.06*	(.24)
Sex offender	.09	(.28)	.08	(.27)
Prior incarceration	.33	(.47)	.31	(.46)
Incarcerated for property offense	.34	(.47)	.32	(.47)
Incarcerated for drug offense	.16	(.37)	.25*	(.43)
Incarcerated for public order offense	.07	(.26)	.18*	(.38)
Security risk at admission ¹	23.53	(5.78)	26.85*	(5.47)
Security risk at release ¹	23.33	(6.70)	28.19*	(6.15)
Mental health problems	.07	(.26)	.01*	(.10)
Natural log prior misconduct history	2.90	(.99)	1.29*	(1.03)
Time served in prison				
< 1 year	.09	(.29)	.44*	(.50)
1 - 2 years	.19	(.39)	.32*	(.47)
2 - 5 years	.41	(.49)	.20*	(.40)
N =	470		2,591	

Note: ¹ Descriptive statistics based on $N = 470$ and 2,496; * = standardized bias statistic ≥ 20 .

The results of propensity score matching analysis are contained in Table 7. After matching, we were able to achieve balance between the offenders who lost good time and the matched sample of offenders who did not lose good time on all of the relevant covariates except prior violation history. Although achieving this level of balance is better than what would be expected

had a randomized design been used ($p \leq .05$), it is still worth noting that the offenders in the treatment group (those who lost good time) were meaningfully different than the offenders in the control group (those who did not lose good time). We adjusted for this difference between the groups by performing supplementary analyses of the effect of losing good time on recidivism using the matched sample and statistically controlling for prior violation history via logistic regression. The adjusted estimated ATEs reflect the difference in the predicted probabilities of recidivism for offenders who lost good time versus those who did not lose good time.¹⁵

The unadjusted and adjusted ATEs and corresponding standard errors are displayed in Table 8. Based on the unadjusted ATEs, offenders who lost good time had a 5% higher probability of being reincarcerated and a 5% higher probability of being reincarcerated for a new offense relative to offenders who did not lose good time, though this difference was not statistically significant. Based on the adjusted ATEs, however, offenders who lost good time had a 7% higher probability of being reincarcerated and a 7% higher probability of being reincarcerated for a new offense compared to offenders who did not lose good time, and this difference was statistically significant.

We also repeated the analyses by first dividing the group of offenders who lost good time into: 1) offenders who lost good time, but had some or all of their good time restored; and, 2) offenders who lost good time, but did not have any good time restored, and then, comparing each group to a matched sample of offenders who did not lose good time. Of the 295 offenders who lost good time and had some or all of their good time restored, 56% of these offenders had all of their good time restored, whereas the offenders who had some of their good time restored typically had 36% of their good time restored. Offenders who lost good time and did not have

¹⁵ The formula provided by Hanushek and Jackson (1977) was used to transform the coefficient estimates into predicted probabilities. The natural log of rule violation history was held constant at its mean.

any days restored ($N = 175$) typically lost 45 days of good time; 77% of these offenders lost 90 days or less, whereas 4% of the offenders in this group lost more than one year of good time.

Table 7. Comparisons of Offenders who Lost Good Time during their Imprisonment versus Offenders who did not Lose Good Time during their Imprisonment after Matching

Measures	<u>Lost good time</u>		<u>No time lost</u>	
	Mean	(SD)	Mean	(SD)
Age at admission	26.50	(8.75)	28.15	(8.85)
Age at release	31.14	(9.95)	31.22	(9.88)
Female	.04	(.20)	.05	(.22)
Race/ethnicity				
Black	.30	(.46)	.27	(.45)
Hispanic	.15	(.36)	.16	(.36)
Native American	.06	(.24)	.06	(.23)
Other race/ethnicity	.01	(.09)	.01	(.09)
Married	.18	(.39)	.19	(.39)
Child(ren)	.53	(.50)	.58	(.49)
Education				
High school diploma	.17	(.38)	.20	(.40)
GED	.42	(.50)	.41	(.49)
Gang membership	.15	(.36)	.12	(.33)
Sex offender	.09	(.28)	.07	(.25)
Prior incarceration	.33	(.47)	.36	(.48)
Incarcerated for property offense	.34	(.47)	.36	(.48)
Incarcerated for drug offense	.16	(.37)	.18	(.39)
Incarcerated for public order offense	.07	(.26)	.10	(.30)
Security risk at admission	23.53	(5.78)	23.97	(5.79)
Security risk at release	23.33	(6.70)	23.77	(6.59)
Mental health problems	.07	(.26)	.03	(.17)
Natural log prior misconduct history	2.90	(.99)	2.46*	(.83)
Time served in prison				
< 1 year	.09	(.29)	.15	(.35)
1 - 2 years	.19	(.39)	.27	(.45)
2 - 5 years	.41	(.49)	.44	(.50)
$N =$	470		470	

Note: * = standardized bias statistic ≥ 20 .

Regarding the comparison of the offenders who lost good time and had some or all of their good time restored and the matched sample of offenders who did not lose good time, we were

able to achieve balance on all of the relevant covariates except prior violation history. As such, we report both the unadjusted and adjusted estimated ATEs. The results of these analyses are displayed in Table 9. Based on the unadjusted and adjusted ATEs, offenders who lost good time and had some or all of it restored had a higher probability of being reincarcerated (14% and 15%, respectively) and a higher probability of being reincarcerated for a new offense (11% and 13%, respectively) compared to offenders who did not lose good time.

Table 8. Effects of Losing Good Time during Imprisonment on Recidivism

Outcomes	<u>Lost good time</u>		<u>No time lost</u>		ATE	Adj. ATE	(SE)
	Mean	(SD)	Mean	(SD)			
Reincarceration	.31	(.46)	.26	(.44)	.05	.07*	(.03)
Reincarceration-new offense	.28	(.45)	.23	(.42)	.05	.07*	(.03)
<i>N</i> =	470		470				

Note: * = $p \leq .05$.

Table 9. Effects of Losing Good Time (some/all restored) during Imprisonment on Recidivism

Outcomes	<u>Lost good time</u>		<u>No time lost</u>		ATE	Adj. ATE	(SE)
	Mean	(SD)	Mean	(SD)			
Reincarceration	.37	(.48)	.23	(.42)	.14*	.15*	(.04)
Reincarceration-new offense	.33	(.47)	.22	(.42)	.11*	.13*	(.04)
<i>N</i> =	295		295				

Note: * = $p \leq .05$.

Turning to the comparison of offenders who lost good time, but did not have any good time restored and the matched sample of offenders who did not lose good time, we were able to achieve balance between the two groups on all of the relevant covariates. Based on the ATEs (Table 10), offenders who lost good time and did not have any of the time restored had a 5% lower probability of being reincarcerated and a 5% lower probability of being reincarcerated for a new offense compared to offenders who did not lose good time, but this difference was not statistically significant, and should, therefore, be treated as a null effect.

Table 10. Effects of Losing Good Time (none restored) during Imprisonment on Recidivism

Outcomes	<u>Lost good time</u>		<u>No time lost</u>		ATE	(SE)
	Mean	(SD)	Mean	(SD)		
Reincarceration	.21	(.41)	.26	(.44)	-.05	(.05)
Reincarceration-new offense	.19	(.40)	.24	(.43)	-.05	(.04)
<i>N</i> =	175		175			

Note: * = $p \leq .05$.

In sum, our analyses of the effect of losing good time on recidivism (research question 3) revealed that removing good time credits amplified offenders' odds of recidivism, particularly among those offenders who lost good time and had some or all of their good time restored.

CONCLUSIONS

The state of Nebraska's good time law has been the subject of an extensive amount of debate among the state's elected officials, justice system personnel, and citizens. In order to provide the legislature with useful information regarding the law, we examined the administration and effects of Nebraska's good time law. We found that the majority of NDCS inmates included in the study were convicted of multiple rule violations, though most of these convictions were for nonviolent, minor (e.g., Class III) offenses. Corrections officials removed good time credits in response to 6% of the rule violations for which these inmates were convicted. Nearly 20% of the inmates who were convicted of a rule violation lost good time in response to at least one violation.

A goal of prison officials is to administer punishment (e.g., remove good time) in response to prison rule violations in a fair and equitable manner. We examined the factors that influence prison officials' decisions to remove good time (research question 1). We found evidence that prison officials were more likely to consider factors surrounding the violation incident rather than characteristics of the inmate when deciding whether to remove good time. Further, prison

officials were primarily influenced by legally relevant criteria, such as the severity of the violation, as opposed to extra-legal factors such as an inmate's race or ethnicity. The results of our incident level analysis indicated that legal factors accounted for 94% of the explained variation in prison officials decisions to remove good time, while the results of inmate level analysis revealed that 85% of the explained variation in prison officials' decisions to remove good time was attributable to compositional effects of the legally relevant characteristics of the violation incidents. We also found that the strongest predictors of prison officials' decisions to remove good time credits were legal factors reflecting the type (i.e., violent) and seriousness (i.e., Class I) of the rule violation, as well as the inmate's prior violation history. *Accordingly, we can conclude that prison officials, for the most part, made equitable decisions regarding whether to remove good time in response to prison rule violations.*

A goal of sentencing credit laws is to promote prosocial behavior during imprisonment by offering inmates incentive for good behavior and/or deterring them from engaging in antisocial behavior (Johnson & Stageberg, 2014; Lawrence & Lyons, 2011; Weisburd & Chayet, 1989). We assessed whether Nebraska's good time law has achieving this goal by comparing rates of misconduct for inmates who were convicted of a rule violation and lost good time during their first year of imprisonment to those for a matched sample of inmates who were convicted of a rule violation, but received an alternative sanction (research question 2). We found that losing good time had no effect on whether inmates subsequently committed misconduct, or the number of misconducts inmates subsequently committed. These findings also held when we examined the effect of losing good time on the prevalence and incidence of inmates' subsequent Class I misconducts. However, we did find that inmates who lost good time were more likely to perpetrate subsequent violent misconduct than inmates who did not lose good time. *Thus, we can*

conclude that removing good time credits in response to prison rule violations had no effect on inmates' subsequent misbehavior in general, but removing good time credits did amplify inmates' odds of engaging in additional violence in prison.

In addition to subsequent prison misconduct, sentencing credit laws are also intended to reduce recidivism by providing incentive for good behavior and participation in rehabilitative programming (Johnson & Stageberg, 2014; Lawrence & Lyons, 2011; Weisburd & Chayet, 1989). We examined whether Nebraska's good time law has reduced recidivism by comparing recidivism rates of offenders released from prison who lost good time during their imprisonment to those for a matched sample of offenders who were released from prison, but did not lose good time during their imprisonment (research question 3). We found evidence that offenders who lost good time had higher odds of being reincarcerated and higher odds of being reincarcerated for a new offense than offenders who did not lose good time. We also conducted supplementary analyses that involved dividing the group of offenders who lost good time into: 1) offenders who lost good time, but had some or all of their good time restored; and, 2) offenders who lost good time, but did not have any good time restored, and then, comparing each group to a matched sample of offenders who did not lose good time. We found that offenders who lost good time and had some or all of their good time restored had a higher probability of being reincarcerated and a higher probability of being reincarcerated for a new offense relative to offenders who did not lose good time. We observed no meaningful difference between the recidivism rates of offenders who lost good time and had none of their good time restored and the matched sample of offenders who did not lose good time. *Therefore, we can conclude that removing good time credits amplified offenders' odds of recidivism, particularly among those offenders who lost good time and had some or all of their good time restored.*

Although our findings suggest that removing good time credits increased the odds inmates perpetrated subsequent violent prison misconduct, and increased the odds that offenders recidivated after their release, it is important to consider the magnitude of these effects. Inmates who lost good time were 9% more likely to commit subsequent violent acts in prisons relative to inmates who did not lost good time. Offenders who lost good time were 5-7% more likely to recidivate than offenders who did not lose good time, though the difference was more pronounced when offenders who lost good time, but had some or all of their good time restored were compared to offenders who did not lose good time. These differences are not trivial, but their substantive import is one that policy makers should weigh when considering policy options. *Based on our findings, however, we can conclude that removing good time credits does not improve offender behavior, whether in prison or upon release.*

The purpose of this study was to provide useful information to policy makers so that they might act in an informed manner. As such, we do not make specific policy recommendations here. Although the findings from this study revealed that Nebraska's good time law has not achieved several of its goals, it is worth reiterating that sentencing credit laws such as Nebraska's good time law do have other goals such as reducing prison populations and lowering correctional costs (Johnson & Stageberg, 2014; Lawrence & Lyons, 2011; Weisburd & Chayet, 1989). We did not assess whether the good time law has achieved these goals here, but it would be hard to argue that reducing the sentences of most inmates by at least half would not have dramatic effects on Nebraska's prison population. On the other hand, a recent study by the Council of State Governments (2014) revealed that over 97% of judges in Nebraska consider the impact of the good time law when determining how long to sentence an offender to prison (Pelka, Weckerly, Bonilla, & Wilson, 2014). Therefore, the effect of the good time law on prison

population may not be that significant, though a more detailed analysis would be needed to support this claim.

Nebraska's prison population greatly exceeds the design capacity of its prisons (i.e., 150%), and this has been the case for a number of years (Pelka et al., 2014). The need for comprehensive reform to Nebraska's criminal justice system is great, and likely goes well beyond repealing or modifying the good time law. Given that nearly all judges in Nebraska consider the good time law when sentencing defendants, it is reasonable to expect that any modification to the good time law would be accompanied by a change in judicial sentencing practices that would undermine the impact of any legislative change on prison populations. Moreover, the findings from this study suggest that prison officials rarely remove good time credits in response to prison rule violations, perhaps because they are aware that the removal of good time credits does not improve offender behavior. It seems, therefore, that any modifications to the good time law that might increase the odds that inmates lose good time in response to rule violations would have little effect on offender behavior and could worsen it. It seems inadvisable, therefore, to repeal or modify the good time law unless such a change is made in concert with a comprehensive reform to Nebraska's entire justice system. For instance, if the good time law was modified in conjunction with legislative changes that: 1) reduced the flow of new court commitments into the state's prisons by making increased use of probation for lower risk offenders; and, 2) increased the window for parole eligibility for offenders sentenced to prison, then Nebraska's prison population may be alleviated. However, a more systematic and comprehensive evaluation of sentencing and parole practices in Nebraska would be needed in order to truly understand the possible efficacy of such a reform.

Altogether, the findings from this study of the administration and effects of Nebraska's good time laws suggest that Nebraska prison officials' decisions to remove good time are primarily being made in an equitable manner, but that removing good time credits in response to prison rule violations has little impact on offender behavior, whether in prison or upon release. Sentencing credit laws such as Nebraska's good time law exist in most states, but this is only one of a handful of studies of the administration or effects of these laws. More studies of sentencing credit laws are sorely needed. The need to understand the use and effects of sentencing credit laws is clear, and it is only through continued evaluation of these laws that policy makers can better understand how and whether these laws work to achieve their intended goals.

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