

FINAL REPORT

The Impact of Illinois' Truth-in-Sentencing Law on Sentence Lengths, Time to Serve and Disciplinary Incidents of Convicted Murderers and Sex Offenders

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Table of Contents

Executive Summary	3
Introduction.....	8
Literature Review.....	13
Methodology	18
Impact of TIS on Sentence Lengths & Lengths of Time to Serve.....	26
Impact of TIS on Disciplinary Incidents.....	39
References.....	60
Appendixes	62

Executive Summary

Truth-in-sentencing (TIS) policies require those convicted and sentenced to prison to serve at least 85 percent of their court-imposed sentence, and often results in inmates serving longer periods of incarceration. Although the move to increase sentence lengths and time served for violent offenders through TIS types of laws in the United States began in the late 1980s, the federal TIS legislation passed in 1994 and the federal TIS Incentive Grant Program initiated in 1996 were associated with many states adopting laws that required those sentenced to prison for various violent crimes to serve at least 85 percent of their sentence (Rosich & Kane, 2005). Although most criminal justice practitioners, and convicted offenders, were well aware that most inmates only served a fraction—35 to 50 percent—of their sentence, the increasingly punitive sentiment during the early 1990s, associated with a relatively high rate of violent crime, brought the issue of this disparity between sentences imposed and time served to light and prompted the increased passage of TIS laws. Following the passage of the federal TIS grant program, Illinois formed a Truth-in-Sentencing Commission to examine Illinois' current sentencing policies and determined that the state should adopt its own version of TIS. Illinois adopted its version of TIS in August 1995 (State Fiscal Year 1996), which requires those convicted of murder to serve 100 percent of their sentence, those convicted of criminal sexual assault to serve at least 85 percent of their sentence, and those sentenced to prison for other violent crimes involving great bodily harm to also serve at least 85 percent of their sentence. Prior to the implementation of TIS in Illinois, those sentenced to prison for murder and criminal sexual assault served, on average, less than 40 percent of their sentences as a result of the various Good Conduct Credit (GCC), Meritorious Good Time (MGT), and Supplemental Meritorious Good Time (SMGT) reductions (Illinois Criminal Justice Information Authority, 1994).

However, the proposed implementation of TIS in Illinois was also met with some concern and criticism, including: 1) the potential for increased inmate assaults and rule violations due to fewer incentives to behave, 2) an overly burdensome financial impact if the law actually resulted in inmates spending more time in prison than before TIS, or 3) no change whatsoever in the amount of time served in prison due to criminal justice practitioners (judges, prosecutors and defense attorneys) merely reducing sentences proportionally, thereby resulting in those sentenced to prison still serving the same time behind bars (Illinois Criminal Justice Information Authority, 1994:2). Concerns raised by the Illinois Department of Corrections (IDOC) included the fiscal impact if the law resulted in inmates actually serving longer sentences, as well as concerns regarding the behavior of inmates and the safety of staff if those sentenced to prison for serious crimes had no incentive (i.e., good conduct credit) to follow institutional rules. On the other hand, many argued that the fiscal impact projections by the IDOC were exaggerated and the logic of longer lengths of stay in prison flawed. TIS opponents argued that the actual length of time inmates spent in prison would remain the same if judges adjusted their sentences to be consistent with the amount of time offenders served before TIS was implemented. After 15 years of actual experience with TIS in Illinois, and thousands of offenders being sentenced under the law, the current study sought to answer two of the key questions regarding the implementation and impact of Illinois' TIS law as it pertains to convicted murderers and sex offenders: 1) has TIS changed the sentence lengths and lengths of time to serve in prison for murderers and sex offenders, and if so, to what degree, and 2) has TIS had an influence on the extent and nature of disciplinary infractions of inmates admitted to prison for murder and sex offenses subject to the law, and if so, to what degree.

Impact of TIS on Sentences & Lengths of Time to Serve for Murderers

The first set of analyses sought to merely examine the overall pattern of sentences imposed on those convicted of murder in Illinois between SFY 1989 and 2008, including analyses of the mean and median sentences imposed (for determinate sentences), and the proportion of offenders that received sentences beyond the statutory maximum of 60 years. From these analyses, a number of patterns were evident that have implications for understanding the potential impact of TIS on murder sentences. First, using multivariate analyses that statistically controlled for the influence of age, race, gender, marital status, education level, if the inmate has children, gang membership, prior criminal history, and jurisdiction of sentencing (independent variables) on the sentence lengths (dependent variable), we found that TIS was associated with, on average, a 3.9 year *reduction* in the mean *sentence* length of those that received determinate sentences (i.e., excluding natural life or death sentences). In other words, once you statistically take into account the effects of the independent variables and adjust for the pre-TIS trend in sentencing, TIS resulted in a decrease of 3.9 years on the average *sentence* imposed on murderers, or about a 10 percent reduction in sentence lengths. However, a more practical way to examine the impact of TIS is by considering the *actual amount of time* that will be required to be served by those convicted of murder. Substituting the time to serve for the sentence imposed reveals that those subject to TIS are expected, on average, to serve 17 years *more* in prison than those not subject to TIS after statistically controlling for the other variables in the analyses. Thus, while TIS did reduce the length of *sentences* imposed on convicted murderers *to some degree*, the decrease was nowhere near what some believed it would be (i.e., that sentences would be cut nearly in half to account for the fact that 100 percent will be served under TIS as opposed to the 50 percent served under the old law).

The next set of analyses sought to determine if the TIS law was associated with any change in the likelihood that a convicted murderer would receive a sentence beyond the statutory maximum of 60 years. Under Illinois law, a sentence beyond the statutory maximum, or a sentence of natural life or death in the case of murder, can be sought when specific, aggravating circumstances are present. Again using multivariate analyses to statistically control for other factors, a generally consistent pattern emerged: those subject to TIS were *less likely* to receive a sentence beyond 60 years (relative to the pre-TIS group as well as relative to those convicted during the same time period but not subject to the law). Specifically, those subject to TIS were 57 percent *less likely* to receive a sentence of more than 60 years (including natural life or death sentences) than those sentenced prior to TIS. Looked at another way, roughly 25 percent of convicted murderers not subject to TIS received a sentence beyond the statutory maximum of 60 years, compared to 17 percent of those subject to TIS.

Taking these findings into account, our analyses regarding the impact of TIS on murder sentences revealed two substantial findings, which have considerable implications: 1) the average determinate sentence imposed on convicted murderers was reduced *only slightly* as a result of TIS, resulting in offenders serving much longer periods of time in prison, and 2) TIS appears to have reduced the use (or need) to impose sentences beyond the statutory maximum of 60 years. Thus, the passage of TIS has dramatically increased the *actual amount* of time those convicted of murder will spend in prison, and as a result, the cost per murder sentence imposed in Illinois dramatically increased as a result of TIS. In addition to longer periods of incarceration, and therefore higher costs, a much larger proportion of convicted murderers in Illinois will now serve the rest of their life in prison, despite the fact that the actual imposition of natural life sentences has been reduced due to TIS. Because the

lengths of time to serve in prison increased so much as a result of TIS, it is projected that 30 percent (886 of the 3,000 murderers sentenced under TIS) of all inmates convicted of murder and subject to TIS will not be eligible for release until after their 75th birthday--the average life expectancy of males in the United States. However, while 30 percent of murderers sentenced under TIS received sentences that will result in them most likely spending the rest of their life in prison, only a small proportion of these were explicit “natural life” or “death” sentences. Of all the murderers sentenced under TIS and projected to be in prison beyond their 75th birthday, only 13 percent had a “natural life” or “death” sentence imposed by the court. By comparison, pre-TIS, only 15 percent of all convicted murderers received a sentence that would keep them in prison beyond their 75th birthday, and almost all of these (90 percent) were court-imposed sentences of “natural life” or “death.”

Impact of TIS on Sentences & Lengths of Time to Serve for Class X Sex Offenders

Analyses similar to those performed to examine the impact of TIS on murder sentences were performed to examine the impact of TIS on the sentence lengths of those convicted of aggravated criminal sexual assault. The average sentence imposed on Class X sex offenders pre-TIS was 13.5 years. Using multivariate statistical analyses similar to those in the murder analyses, we found that TIS was associated with a slight *reduction* in the mean sentence length by approximately 6 months. Thus, the impact of TIS on the sentence lengths and lengths of time to serve for sex offenders is somewhat similar to that seen with convicted murderers, although to a lesser degree due to the sentence lengths involved. Still, as a result of TIS, convicted Class X sex offenders are now serving substantially longer periods of incarceration than they did pre-TIS. On average, those sex offenders subject to TIS will serve an average of 9.7 years in prison, compared to the roughly 6.2 years those sentenced prior to TIS served.

Impact of TIS on Disciplinary Incidents and Sanctions for Murderers

To determine if TIS had an impact on the extent and nature of disciplinary incidents among murderers in Illinois, data were obtained that allowed for the tracking of disciplinary incidents for a cohort of murderers admitted to prison in Illinois between July 1999 and June 2001. Disciplinary data included those recorded through March 2008, so the average amount of time inmates were at risk of having a disciplinary incident was 8 years. Within the sample of murderers tracked were 300 inmates subject to TIS and 550 that were eligible for day-for-day good conduct credit. The specific disciplinary outcomes examined included: total number of disciplinary tickets, any serious incident (yes or no), any assaults (yes or no), assaults of staff (yes or no), and assaults of other inmates (yes or no).

Among the overall sample of murderers included in the analyses of disciplinary incidents, the average number of disciplinary tickets was 22. When multivariate statistical analyses were performed to isolate the influence of TIS on the overall number of disciplinary incidents/tickets, the analyses revealed that murderers subject to TIS *receiving an average of almost 5 fewer tickets*, on average, than non-TIS inmates. Additional analyses revealed that TIS had no statistical relationship with whether or not the inmate received a disciplinary ticket for a *serious* incident: roughly 55 percent of both TIS and non-TIS murderers had a ticket for a serious incident. Serious incidents were defined as any offenses that carry a maximum penalty of one year of loss or restriction of privileges, grade reduction, good time revocation and/or segregation, and included offenses in such

as violent assaults or participation in a security threat group. Similarly, TIS had no statistical relationship with whether or not the inmate received a disciplinary ticket for an assault, against either another inmate or staff, with roughly 19 percent of both TIS and non-TIS murderers receiving a ticket for any assault. Analyses were also performed to determine if an inmate's TIS status had any influence on the types of sanctions imposed by IDOC for disciplinary incidents. Among the sample of murderers, the most prevalent form of sanction imposed on those receiving disciplinary tickets was loss of commissary privileges, and no statistical difference was noted between those murderers subject to TIS and those not: roughly 90 percent of both groups lost their commissary privileges for a period of time as a result of a disciplinary incident. For the other forms of punishment, including placement in segregation, loss of gym/yard privileges, and loss of good conduct credit, no statistical differences were identified based on the inmates' TIS status.

Thus, based on these analyses, there were few differences between those murderers subject to TIS and those not subject to TIS in terms of their disciplinary records, particularly in terms of assaults on staff and other inmates.

Impact of TIS on Disciplinary Incidents and Sanctions for Class X Sex Offenders

Similar analyses were performed to determine if TIS had an impact on the extent and nature of disciplinary incidents among Class X sex offenders in Illinois, with data obtained that allowed for the tracking of disciplinary incidents for a cohort of sex offenders admitted to prison in Illinois between July 1999 and June 2001. Disciplinary data included that recorded through March 2008, so the average amount of time inmates were at risk of having a disciplinary incident was 8 years. Within the sample of sex offenders tracked were 806 inmates subject to TIS and 599 that were eligible for day-for-day good conduct credit. Overall, the analyses showed no statistical difference in the average number of disciplinary tickets between Class X sex offenders subject to TIS and those not subject to TIS (an average of roughly 22 incidents for each group). As with the analyses of convicted murderers, among the Class X sex offenders there was no statistical relationship between whether they were subject to TIS whether or not the inmate received a disciplinary ticket for a serious offense, including assaults against staff or other inmates, and most forms of sanction imposed on disciplinary incidents.

Conclusions

As a result of the examination of sentences imposed, time to serve, and disciplinary incidents, the following general conclusions were reached. First, the length of court-imposed sentences changed very little as a result of Illinois' Truth-in-Sentencing law, and as a result, the length of time *to be served* by those convicted of murder and aggravated criminal sexual assault in Illinois has increased dramatically. For those convicted of murder, these increased lengths of time to serve has resulted in a much larger proportion of these offenders that will not be eligible for release until after their 75th birthday. Although the length of time to serve among sex offenders has also increased, because the sentence lengths are not as long as those imposed on murderers, the impact of TIS on the projected age of offenders at release did not change as substantially. Thus, while many believed that sentence lengths under TIS would change (be reduced) dramatically to take into account the fact that a larger proportion of the sentence would be served, this has not occurred, and those sentenced under TIS are serving up to twice as long in prison as they did prior to TIS. Second, TIS does not appear to have

had any influence over the extent and nature of disciplinary incidents of murderers and sex offenders in Illinois' prisons. Prior to TIS there were concerns that inmates with little opportunity to earn good conduct credit would engage in more, and more serious, disciplinary incidents. Our analyses revealed that this has not occurred, with inmates subject to TIS having similar patterns of disciplinary infractions as those not subject to TIS.

INTRODUCTION

Truth-in-sentencing, or TIS, reflects the public policy designed to address what many see as a misleading disparity between the sentences imposed on convicted felons and the actual amount of time they serve in prison. As a result of prison inmates being eligible to receive good-conduct credit and other sentence reductions, those sentenced to prison in the United States and released during 1990 were found to have served, on average, only 38 percent of their court-imposed sentence, although the proportion of time served was slightly higher for those convicted of murder (43 percent) and rape (45 percent) (Ditton & Wilson, 1999: 8). Part of this disparity between sentence length and amount of time actually served is the result of statutory provisions that allow prison officials to give inmates good conduct credit, usually one day off of their sentence for each day they follow prison rules (i.e., day-for-day good conduct credit). Many point to this provision as an important behavior management tool correctional administrators use to provide inmates with an incentive to follow rules.

In addition, some states, including Illinois, have allowed correctional officials to further reduce lengths of stay in prison through additional types of good conduct credits, such as Meritorious Good Time (MGT) and Supplemental Meritorious Good Time (SMGT). In Illinois, MGT and SMGT were primarily put in place in response to prison crowding conditions and the need to reduce prison populations (Illinois Task Force on Crime and Corrections, 1993), and allowed most inmates to receive an additional 180 days off of their sentence. In addition, Illinois also created a provision designed as an incentive for prison inmates to participate in rehabilitative programming, known as Earned Good Conduct Credit (EGCC), whereby inmates could earn an additional one-half day off their sentence for each day they participated in drug treatment and vocational training. Thus, the ability of correctional administrators to reduce the actual amount of time served for court imposed prison sentences was seen not only as an effective tool for increasing inmate compliance with rules and allowing for early release to control prison populations, but also, in the case of EGCC, providing inmates with an incentive to rehabilitate themselves through program participation. Evidence that inmates are motivated by these types of incentives, such as EGCC, have been documented in the ongoing evaluation of the Illinois Department of Corrections' Sheridan Correctional Center (Olson, 2005), which found inmates earning EGCC were more likely to comply with program requirements

and complete the program successfully than those not eligible for EGCC.

Despite the fact that most criminal justice practitioners, and convicted offenders, were well aware that most inmates only served a fraction of their sentence, the increasingly punitive sentiment during the early 1990s, associated with a relatively high rate of violent crime, brought the issue of this disparity between sentences imposed and time served to light. Further, although the move to increase sentence lengths and time served for violent offenders through Truth-in-Sentencing (TIS) types of laws in the United States began in the late 1980s, the federal TIS legislation passed in 1994 and the federal TIS Incentive Grant Program initiated in 1996 were associated with many states adopting laws that required those sentenced to prison for various violent crimes to serve at least 85 percent of their sentence (Rosich & Kane, 2005). Illinois adopted its version of TIS in August 1995 (State Fiscal Year 1996), which requires those convicted of murder to serve 100 percent of their sentence, those convicted of criminal sexual assault to serve at least 85 percent of their sentence, and those sentenced to prison for other violent crimes involving great bodily harm to also serve at least 85 percent of their sentence. Prior to the implementation of TIS in Illinois, those sentenced to prison for murder and criminal sexual assault served, on average, less than 40 percent of their sentences as a result of the various GCC, MGT, and SMGT reductions (Illinois Criminal Justice Information Authority, 1994).

The support for TIS in Illinois and elsewhere in the country came from the belief that the law would achieve crime reduction and increase public satisfaction with the criminal justice system. In Illinois, supporters believed crime rates would be reduced by inmates being kept off the streets for longer periods of time, and thereby being released at an older age, which was correlated with lower recidivism rates (Illinois Criminal Justice Information Authority, 1994). This long-term reduction in crime, it was argued, would result in lower expenditures by the components of the criminal justice system (Illinois Criminal Justice Information Authority, 1994:2). This logic of reduced crime as a result of longer sentences and deterrence was also argued in other states, and in Virginia these assumptions were examined by researchers and found to be “conceptually sound and conservative” (Ostrom, Cheesman, Jones, Peterson & Kauder, 2001:2). In addition, proponents felt that the “integrity of the criminal justice system would be strengthened” (Illinois Criminal Justice Information Authority, 1994:2) since large differences between the imposed sentences and actual

time served “breed disrespect for the system among offenders, victims and the general public” (Illinois Criminal Justice Information Authority, 1994:2). Through TIS, it was believed, this disparity would be eliminated and public satisfaction with the justice system would be enhanced.

However, the proposed implementation of TIS was also met with some concern and criticism, including: 1) the potential for increased inmate assaults and rule violations due to fewer incentives to behave, 2) an overly burdensome financial impact if the result actually resulted in inmates spending more time in prison than before TIS, or 3) no change whatsoever in the amount of time served in prison due to criminal justice practitioners (judges, prosecutors and defense attorneys) merely reducing sentences proportionally, thereby resulting in those sentenced to prison still serving the same time behind bars (Illinois Criminal Justice Information Authority, 1994:2). Concerns raised by the Illinois Department of Corrections (IDOC) included the fiscal impact if the law resulted in inmates actually serving longer sentences, as well as concerns regarding the behavior of inmates and the safety of staff if those sentenced to prison for serious crimes had no incentive (i.e., good conduct credit) to follow institutional rules. In terms of cost, IDOC projections in 1998 on the cost to expand TIS to all non-probationable violent felonies exceeded \$500 million over ten years (Illinois Truth-in-Sentencing Commission, 1998:25). On the other hand, many argued that the fiscal impact projections by the IDOC were exaggerated and the logic of longer lengths of stay in prison was flawed. TIS opponents argued that the actual length of time inmates spent in prison would remain the same if judges adjusted their sentences to be consistent with the amount of time offenders served before TIS was implemented. Despite these concerns, TIS in Illinois was implemented in 1995.¹

As described earlier, it was projected by policy makers and practitioners that this law could result in either longer lengths of incarceration, if sentencing practices did not change, or similar lengths of time served, but higher proportions of the court-imposed sentences being served, if sentence lengths

¹ Although passed and signed into law in 1995 (with an effective date of August 1, 1995), a legal challenge to the law was quickly filed challenging the legislative procedure used to pass the TIS law. Concern over this challenge led the Illinois legislature to re-pass a new version of the law, ensuring procedural processes were followed, and the new version of TIS was signed into law with an effective date of June 18, 1998 (State Fiscal Year 1998). During this period between the first version being passed and in effect and the new version being passed (August 1995 to June 1998), offenders were being sentenced under the original version of TIS. The Illinois Supreme Court ultimately ruled the original TIS law unconstitutional (the one effective August 1995) due to it violating the single subject rule for legislation. As a result of the original law being overturned, all those sentenced under the old law had their sentences automatically changed to allow them to earn good conduct credit similar to that pre-TIS.

were adjusted downward to take into account the effect of TIS. For those sentenced to prison under TIS, they must serve between 85 and 100 percent of their court-imposed sentence, and thus, it was argued by some that the law would reduce crime by incarcerating serious offenders for a longer period of time. The two most serious types of criminals included under this dimension of the law are murderers (who must serve 100 percent of their sentence) and Class X felony sex offenders (those convicted of aggravated criminal sexual assault and predatory criminal sexual assault who must serve 85 percent of their sentence). For those convicted of murder, state law requires that they receive a prison sentence of between 20 and 60 years, or when specific aggravating circumstances are present, a determinate sentence of more than 60 years is allowable, as is a sentence of life in prison or the death penalty. Prior to the implementation of TIS in Illinois (i.e., 1995), the average prison *sentence* length for those convicted of murder was 35 years and the projected average amount of time served for those offenders was slightly less than 17 years (Illinois Department of Corrections, 2001). Thus, depending on how sentence lengths are influenced by the prospect of TIS, the end result could be longer lengths of time served in prison (which is what proponents of the law hoping to incapacitate offenders longer argued would be the benefit), the same lengths of time served in prison (which is what opponents argued would happen as a result of changing sentencing practices), or somewhere in between.

However, after 15 years of actual experience with TIS in Illinois, and thousands of offenders being sentenced under the law, relatively little research regarding the implementation, impact or characteristics of those sentenced under TIS in Illinois has been conducted, and nationally these assessments have been limited. The exception to this in Illinois is a brief summary included in the Illinois Department of Corrections' Annual Statistical Presentation, which provides information on how many inmates are serving sentences under TIS, the average time they have served, and the amount of time left to serve (Illinois Department of Corrections, 2005). Thus, despite the concerns raised by many leading up to the passage of the law, and the potential impact the law was projected to have from fiscal and staff safety perspectives, relatively little systematic assessment of the law has occurred. The current research is designed to fill this gap and represents the only effort to systematically examine the impact that TIS in Illinois has had on sentence lengths, lengths of time to serve, and inmate disciplinary incidents.

Thus, the current study seeks to answer two of the key questions regarding the implementation of Illinois' TIS law as it pertains to convicted murderers and sex offenders: 1) has TIS changed the sentence lengths and lengths of time to serve in prison for murderers and sex offenders, and if so, to what degree, and 2) has TIS had an influence on the extent and nature of disciplinary infractions of inmates admitted to prison for murder and sex offenses subject to the law, and if so, to what degree.

LITERATURE REVIEW

Although truth-in-sentencing types of policies were implemented in many states during the 1980s, it was not until the federal law was passed during the 1990s that the implementation and impact of the law received much attention from researchers. Further, given that many states did not implement the TIS law until the 1990s, many analyses done during that time were premature and were not able to determine the full impact on sentencing and inmate behaviors due to little time elapsing between implementation and evaluation. For the most part, the literature can be divided into three categories: 1) assessments that attempted to examine, at a national level, the impact of TIS on sentencing practices and prison management issues, 2) research designed to assess the implementation and impact of TIS in specific states, and 3) theoretical and philosophical discussions on TIS from the standpoint of being overly punitive, reducing judicial discretion, and equity in sentencing. Although important, this latter area regarding the theoretical and philosophical implications of TIS is not examined in the current report. Despite the considerable change that TIS potentially had on sentencing practices, lengths of time served, and inmate management issues, the literature to date on the implementation and impact of TIS is relatively sparse.

In general, the research that has sought to answer the question regarding how TIS has changed sentencing practices is mixed, and appears to vary from state to state depending on how the state's sentencing laws were structured. For example, in an evaluation of the implementation of TIS in Massachusetts, researchers found very little change in actual *sentences* imposed in the pre- versus post-TIS sentences, but a measurable increase in the *projected length of time to serve* (Massachusetts Sentencing Commission, 2000). In Virginia, evaluators discovered that *sentences* for non-violent offenders were lower, but actual time served *remained the same* under TIS. On the other hand, for violent offenders, both sentence lengths *and* projected time to serve *increased* (Ostrom, Cheesman, Jones, Peterson & Kauder, 2001). In examining TIS in Mississippi, researchers concluded that the response by the court community to TIS has been to adjust sentences to maintain the historic "proportionality in punishment," or same average number of years served in prison. Moreover, they found considerable variation in the enforcement of TIS geographically across the state (Wood & Dunaway, 2003). Thus, in some of the evaluations it was determined that TIS was indeed associated with longer lengths of time in prison, while others found no impact, either due to deliberate changes

in the sentencing structures (i.e., Virginia for non-violent offenders) or changing practices by courtroom practitioners when it came to sentencing, as in the case of Mississippi.

There has also been some limited research that has sought to examine the impact of TIS on changes in the overall size of the prison population. For example, a 2002 study conducted by Sabol, et al. (2002) was concerned with the overall effects of TIS on the prison population size in seven different jurisdictions, one of which was Illinois. In answering one of their research questions, they found that TIS reform had a larger impact on prison populations than did other factors, such as changes in demographic characteristics of offenders or states and the types of offenses resulting in prison sentences.

Given the fact that the impact of the law appears to vary from state to state, depending on the offenses covered under TIS and the overall sentencing structure and/or courtroom culture in place, it is clear that analyses need to be done on a state-by-state basis to take into account the nuances of each state's TIS law and sentencing structure to assess impact on sentence lengths and/or lengths of time to serve. Indeed, it may also be important to examine the impact of TIS across different types of jurisdictions within the same state, as there is evidence from Illinois that the application and use of certain types of criminal sentences—ranging from capital punishment to the imposition of fines-- vary between Cook County (Chicago), suburban and downstate urban counties and rural jurisdictions. For example, research in Illinois by Pierce & Radelet (2002) found greater use of death sentences in rural jurisdictions than more urban areas after statistically controlling for other variables. Similarly, Olson & Ramker (2001) found the odds of having financial conditions ordered as part of probation sentences were higher in rural jurisdictions in Illinois than more urban counties after statistically controlling for other variables.

Similarly, when researchers sought to examine the degree to which TIS has produced management issues for prisons associated with the hypothesized reduction in good conduct incentives, the findings are mixed and limited. For example, in a national study completed in 2003, Turner, Hickman, Green & Fain found some evidence that TIS was associated with higher levels of prison management *concerns*. However, their conclusions are tentative due to the aggregation at a national level, the data only being collected shortly after the implementation of TIS, and the fact that they

were asking administrators about their *perceptions* rather than having actual data available regarding increased incidents or disciplinary problems associated with the law. However, empirical evidence indicating the adverse impact of TIS on disciplinary incidents is evident from research conducted in two states. In separate studies regarding the impact of TIS on inmate behaviors in South Carolina and North Carolina researchers found that those sentenced under TIS did have more behavioral problems and violated prison rules at higher rates and more quickly than did similar inmates admitted to prison sentenced under the old, non-TIS law (North Carolina Criminal Justice Analysis Center, 1998; Fowler et. al., 2002). Specifically, in North Carolina, using multivariate techniques (Cox Regression and Negative Binomial Regression) and controlling for various inmate characteristics, researchers found that those sentenced under North Carolina's version of Truth-in-Sentencing (referred to as the Structured Sentencing Act, or SSA) had a weighted disciplinary violation rate almost 20 percent higher than the non-Truth-in-Sentencing inmates (North Carolina Criminal Justice Analysis Center, 1998). Further, those sentenced under North Carolina's version of TIS also had much higher rate for assaultive offenses within the institutions—71 percent higher—than those sentenced under the “old” law (Ibid). Similar findings were also reached when researchers examined the impact of TIS on inmate behavior in South Carolina. Specifically, Fowler et. al. (2002) found that inmates sentenced under South Carolina's version of TIS were more likely to have disciplinary infractions than those not sentenced under TIS, and that the time-to-infraction was much shorter for the TIS versus the non-TIS inmates, after statistically controlling for offense type, age, length of time to serve and admission date.

In addition to there being some limited research that has examined the relationship between TIS laws and inmate behaviors, there is a much more extensive body of literature that has examined other correlates of inmate disciplinary incidents. For example, some of the extant research on inmate misbehavior comes from that done in other specific states and has tended to focus on comparing the behavior of long term inmates with that of short term inmates. However, there is little or no regard for the TIS status of inmates. For instance, a study conducted by Cunningham, Sorensen and Reidy (2005) in a Missouri state prison sought to determine which risk factors best predict assaultive violence compared across three categories of prisoners: term inmates (inmates serving a specific length of time), inmates serving life sentences, and inmates sentenced to death. Their findings noted that as inmates get older, they are less likely to exhibit assaultive violence. Interestingly, they found

that inmates sentenced to life were 51 percent *less likely* than term inmates to commit a violent assault, and that death-sentenced inmates were 45 percent *less likely* to commit a violent assault while in prison relative to inmates serving a specific term. Thus, while it would appear from these findings that those inmates “with nothing to lose” (i.e., those sentenced to life or death) were less likely to be assaultive, it is important to note that those sentenced to life in the Cunningham et. al (2005) study still had a chance at release by way of parole, and thus may have been less likely to be assaultive given this hope of release.

In a similar study that sought to gauge the effects that “no hope of release” would have on inmates, Sorensen and Wrinkle (1996) conducted a similar study, also in Missouri, comparing the assaultive violence incidents of death-sentenced and life without parole (LWOP) inmates to inmates serving life with the possibility of parole. Using bivariate statistical analyses, Sorensen and Wrinkle found that LWOP inmates were significantly less likely to receive disciplinary infractions for assaultive behavior than inmates serving life with parole. However, in multivariate analyses, these distinctions did not hold up. Their multivariate models found that type of sentence (death, LWOP, or life with parole) did not contribute significantly to the prediction of disciplinary violations, or assaultive behavior. They did, however, find a curvilinear distribution of disciplinary infractions for LWOP inmates, suggesting that the prevalence of disciplinary infractions is high at the beginning of a long sentence, hits a peak in this early period, and then declines once an LWOP inmate settles in to the prison routine. Separate analyses of these data collected in Missouri by Sorensen, Wrinkle and Gutierrez (1998) noted that the highest risk inmates for assaultive offenses were most likely to be young and African-American. Consistent with Sorensen and Wrinkle (1996), their results showed that inmates with no hope of parole do not represent a greater threat to the security of prisons. Instead, they found that more attention should be paid to inmates who do have a chance at release, as their rates of misconduct are higher.

A more recent study in Florida by Cunningham and Sorensen (2006) looked at the same types of inmates by sentence, but also included some TIS offenders in the sample serving at least 85 percent of their sentence. In the study, Cunningham and Sorensen (2006) came to similar conclusions as the previously noted studies. Generally, they found that inmates serving less than 20 years had the highest rates of assaultive behavior. More specifically, they found that shorter-term inmates (10-14

years) had the highest rates of assaultive behavior, followed by inmates serving 15-19 years. Longer-term inmates, especially LWOP inmates had much lower rates of assaultive behaviors. There are some caveats with this study, however. It should be noted that some of the longer-term inmates may have been transferred to lower security classifications, leaving a cohort that was more violent to begin with.

Finally, Berk, Kriegler and Baek (2006) conducted a study in California in order to create a model to forecast which inmates would be most likely to engage in serious misconduct. Using multivariate techniques, the study found the length of sentence to be the biggest predictive factor for serious misconduct, followed by age at first arrest and gang affiliation. Consistent with the studies mentioned above, inmates serving *shorter* sentences (6-10 years in this case) were much *more likely* to be involved in serious misconduct. As well, Berk et al. (2006) also found that younger inmates were much more likely to be involved in serious misconduct.

Thus, while some research has sought to examine the implementation and impact of TIS in the U.S. and across specific, individual states, the findings appear to be limited and parochial. What is available, however, suggests that these types of analyses need to be carried out on a state-by-state basis in order to accurately assess impact and account for unique aspects of TIS laws across the states, and the degree to which courtroom personnel have the capacity to negate the intentions of the law through the use of their discretion when it comes to sentencing. Similarly, in terms of the impact of TIS on institutional behaviors of inmates, there have only been a handful of studies that have examined this dimension of the policy. Although the two studies cited here from North and South Carolina would appear to support the notion that TIS has increased the frequency and nature of inmate disciplinary incidents, the populations subject to TIS in those states appears to be quite broad (i.e., all violent offenders), and therefore requires replication in other states and with more specific offenses targeted under the TIS laws. Further, the existing literature on inmate disciplinary patterns, particularly for those convicted of murder, appears to suggest that longer lengths of time to serve may actually *reduce* the incidence and nature of institutional violence by inmates, and that other inmate characteristics, such as age, need to be statistically controlled.

METHODOLOGY

The methodology that was used to examine TIS in Illinois builds upon the methods used in TIS assessments in other states, and also advances the knowledge due to the unique nature of Illinois' law and its implementation. Given the limited examination of TIS in Illinois, and the fact that each year new crimes are considered for inclusion under the TIS sentencing provisions, it is hoped that this formal, independent evaluation of the impact of Illinois' Truth-in-Sentencing law can inform and guide future policy and practice in Illinois. Specifically, the current research sought to answer the following two research questions:

- 1) Has the implementation of Truth-in-Sentencing affected sentence lengths/projected lengths of time to serve among those sentenced to prison in Illinois for murder and Class X sex offenses (i.e., aggravated criminal sexual assault and predatory criminal sexual assault), and if so, how?
- 2) Have those sentenced under Truth-in-Sentencing for murder and Class X sex offenses been more likely to be involved in disciplinary incidents, particularly for assaultive behaviors, than those not subject to Truth-in-Sentencing, and if so, how?

Data Sources

All of the data used in the current analyses were provided to the research team by the Illinois Department of Corrections (IDOC), and come from administrative records collected and maintained by IDOC during the normal processing of adult inmates. Among the data provided for the evaluation was offender-level information collected during the admission of the inmate into IDOC (i.e., from IDOC admissions data files), including the inmate's demographic characteristics, marital and education status, gang involvement, current conviction offense and sentence imposed, county of conviction, prior prison sentences, and whether they were subject to TIS or not. These data were provided for every adult inmate admitted to IDOC from State Fiscal Year (SFY) 1989 through SFY 2008. These years cover the period from July 1988 through June 2008. The number of murderers included in these data totaled 9,102 and the number of inmates sentenced for Class X sex offenses totaled 7,150.

In addition to these admissions data, offender-level data were also provided regarding the disciplinary history of a smaller sub-sample of the group described above. Specifically, for those adult inmates admitted to IDOC during SFY 2000 and 2001 for murder (N=849) or aggravated criminal sexual assault (N=641), detailed, case-level data for each disciplinary incident from the date of their admission through March 2008 were obtained, including the date of the incident, a description of the incident, and the sanction imposed for the incident. These data were merged with the data obtained from the admissions files for those inmates included in this sub-sample of inmates selected for the analyses of institutional rule violations.

The way the Illinois' TIS law was written, only those whose crime was *committed* after the effective date of the legislation (August 1995) were subjected to the 85 to 100 percent requirement. Thus, given how long some of the more serious crimes take to adjudicate, during the period after the effective date of the TIS law (August 1995) judges were sentencing some murders and sex offenders under the old law (which allowed for good conduct credit to be earned) and the new TIS law (which eliminated or severely limited the amount of good-conduct credit that could be earned). This unique situation provided for an opportunity to conduct a natural experiment of the effect TIS had on sentence lengths: there is clearly a pre-TIS time period, but there is also a time period where defendants being sentenced for similar crimes and subject to different laws related to the ability to earn good conduct credits.

Methodology Used to Examine Impact of TIS on Sentence Length and Length of Time to Serve

For the first research question, if TIS is actually going to result in inmates sentenced for serious crimes being incarcerated for a longer period of time--the objective of many TIS proponents--then there cannot be dramatic reductions in the sentences imposed in the courts in response to TIS restrictions or plea bargaining involving reduced charges. As described in the literature review, evidence from some states, such as Mississippi, has found that court practitioners, including judges, prosecutors and defense attorneys, have responded to TIS by altering their sentence lengths so that, in the end, the length of time spent in prison under TIS is the same as pre-TIS (Wood and Dunaway, 2003). However, the Woods & Dunaway (2003) conclusions were reached through surveys and interviews with practitioners, not examination of actual data on sentence lengths imposed pre- and

post-TIS. In other states, such as Virginia, *ensuring* that non-violent offenders did not serve longer in prison as a result of TIS was *intentionally and directly addressed* by reducing the sentences allowed under sentencing guidelines for these crimes, while for violent crimes, lengths of time to serve were *increased* (and assured) by an upward shift in sentencing guidelines.

In Illinois, however, given that there are no narrow sentencing guidelines when it comes to murder and Class X sex offenses (murderers can receive a prison sentence of between 20 and 60 years without aggravating circumstances and those convicted of Class X sex offenses can receive 6 to 30 years without additional aggravating circumstances), there is the potential that courtroom personnel could maintain historic lengths of time to serve in prison by adjusting their sentencing practices similar to that purported in Mississippi. For example, the average prison sentence imposed on those convicted of murder in Illinois during 1994 (prior to TIS) was 35 years, and the offender would (without Truth-in-Sentencing) serve roughly one-half of that sentence, or 17.5 years. So, if in sentencing the average murderer the judges' intent was for them to spend 17.5 years in prison, under TIS they could impose a sentence of 20 years (with 100 percent of that being served) and come close to achieving their goal of 17.5 years "behind bars." Similarly, the average prison sentence imposed on those convicted of Aggravated Criminal Sexual Assault in 1994 was 13.1 years, and that offender would be expected to serve roughly 7.5 years. Given the allowable sentencing range of 6 to 30 years for Class X felonies, and the requirement under TIS that these offenders serve 85 percent of their sentence, the same objective of 7.5 years "behind bars" (the pre-TIS average) could be achieved by sentencing them to 9 years ($9 \text{ years} \times .85 = 7.6 \text{ years behind bars}$).²

In examining the impact of TIS on sentence lengths, prior research confirms that it is important to also statistically control for other offender characteristics when examining variation in sentence lengths. For example, Huang, Finn, Ruback and Friedman (1996) found older, better-educated males

² One additional dimension of sentencing sex offenders that could come into play is the potential of plea bargaining, which could result in charges being reduced from Class X to Class 1 felonies (i.e., reduced from Aggravated Criminal Sexual Assault, a Class X felony, to Criminal Sexual Assault, a Class 1 felony). Although both would require that 85 percent of the sentence be served, the allowable sentencing ranges for Class 1 felonies is 4 to 15 years, as opposed to the 6 to 30 years for Class X felonies. Although possible, it is unlikely that murder charges would be altogether dropped during plea bargaining. Our analyses were not able to include the impact of potential plea bargaining on reductions from Class X sex offenses to Class 1 felonies, and it is unlikely to be an issue in the trial and conviction of first degree murderers.

convicted of a violent crime received longer sentence lengths than those with other characteristics. Research has also suggested that sentences imposed in suburban and rural areas tend to be longer than those imposed in urban areas (Austin, 1991), partly explained by the fact that less urban areas tend to have less serious crime, and therefore courts respond more punitively due to the rarity and social outrage of crimes like murder and rape. Also consistent in the literature is the pattern that the more extensive an individual's criminal history, the longer their prison sentence.

Thus, in the current analyses of the impact of TIS on sentence lengths and lengths of time to serve, we will answer the question of whether sentence lengths of murderers and Class X sex offenders were affected by the implementation of TIS after statistically controlling for other factors that have been found to influence sentence lengths, such as age, race, gender, marital status, education level, if the inmate has children, gang membership, prior criminal history, and jurisdiction of sentencing. In order to accomplish this, we will employ multivariate regression techniques, including ordinary least squares (OLS) regression for analyses of changes in the sentence lengths imposed and logistic regression to examine the impact of the law on the use of sentences over the statutory maximums.

In addition to statistically controlling for age, race, gender, education level, marital status, having children, prior prison admissions, prior criminal history and sentencing jurisdiction, in order to determine the extent to which TIS has independently changed sentence lengths, a variable was created to identify those offenders sentenced under TIS and those sentenced under the law that allowed day-for-day good conduct credit. Specifically, we created an interaction term/variable to group the sentenced offenders into 1 of three groups: 1) those sentenced prior to the passage of the TIS law in Illinois (i.e., those cases sentenced prior to 1997, the reference group); 2) those sentenced who were subject to TIS; and 3) those *sentenced* when TIS was effective, *but were not subject to the law* (i.e., committed their crime prior to the effective date of the legislation). The reason to group the cases into one of these three categories was based on the belief that if judges were imposing sentences on those subject to TIS, and taking into account how long the offender would be serving, that it would potentially have an effect on the sentences they were handing down during the same time period to those who were not subject to the law. Indeed, Emerson (1983) found that judges were affected by the nature of the cases that they sentenced in assigning sentences to individual cases. Their sentencing decisions thus were affected by what types of cases preceded a case. Based

on this research, it is theorized that when judges were sentencing separate offenders, but similar types of cases, under the “old” law and “new” TIS laws, there may be some influence on the sentences imposed. In other words, if a judge was sentencing one murderer under TIS today, and then tomorrow was sentencing another under the old law, the two cases and sentences imposed may affect each other.

In addition to examining the impact TIS had on sentence lengths, we also examined the extent to which TIS changed the use of sentences beyond the statutory maximums. Specifically, we examined whether or not TIS was associated with a reduced proportion of murder and Class X sex offense cases with sentence lengths in excess of the statutory maximum (i.e., 20-60 year range for those convicted of murder and 6-30 years for those convicted of aggravated criminal sexual assault). Under Illinois law, a sentence beyond the statutory maximum, or a sentence of natural life or death in the case of murder, can be sought when specific, aggravating circumstances are present. The hypothesis and potential impact of TIS as it relates to sentences above the statutory maximum, or of natural life and death in murder cases, is that prior to TIS, the maximum sentence that could be imposed on murder without proving aggravating circumstances was 60 years, which, with good conduct credit would translate to 30 years in prison. Thus, for a 30-year-old murderer, odds are they would be released from prison before their death (i.e., they would be 60 years old). If the prosecutor wanted to ensure that this individual would not be released from prison, they would need to prove to the judge that aggravating circumstances were present in order to achieve a projected age of release from prison beyond the typical life expectancy (i.e., 70 or 80 years old). However, with TIS, and a 30 year old convicted murderer, it would now be possible to impose a veritable “life” sentence by sentencing them to prison for 60 years, which under TIS, would require the full 60 years to be served, resulting in that inmate not being eligible for release until the age of 90. To examine this potential change, we used logistic regression to examine the degree to which TIS is associated with a shift towards within-range sentence lengths as opposed to sentences beyond the maximum, after statistically controlling for other offender characteristics. Table 1a summarizes the characteristics of the samples used in the analyses of the sentences imposed on convicted murderers and sex offenders (those cases covering the period from SFY 1989 through SFY 2008).

Table 1a

Demographic, Socio-Economic and Criminal History Characteristics of Sentence Analysis Sample

	Murder Sentences N=9,218	Class X Sex Offender Sentences N=7,150
Age	27.08	32.55
Race		
White	17.3%	40.3%
Non-White	82.7%	59.7%
Total	100.0%	100.0%
Gender		
Male	94%	99.2%
Female	6%	0.8%
Total	100.0%	100.0%
Marital Status		
Married/Common Law	14.6%	27.4%
Single/Divorced	85.4%	72.6%
Total	100.0%	100.0%
Education Level		
No HS/GED	61.1%	52.2%
HS/GED	38.9%	47.8%
Total	100.0%	100.0%
Children		
None	50.7%	48.3%
One or More	49.3%	51.7%
Total	100.0%	100.0%
Gang Member		
No	60.1%	81.1%
Yes	39.9%	18.9%
Total	100.0%	100.0%
Region of Illinois		
Cook County	74.3%	54%
Collar County	6.9%	11%
Other Metropolitan Statistical Area	12.8%	18.9%
Rural Area	6%	16.2%
Total	100.0%	100.0%
Prior Prison Sentences		
None	72.6%	75%
One or More	27.4%	25%
Total	100.0%	100.0%
Truth-in-Sentencing		
Pre-TIS	45.8%	48.4%
Non-TIS	21.4%	12.2%
TIS	32.8%	39.3%
Total	100.0%	100.0%

Methodology Used to Examine Impact of TIS on Inmate Disciplinary Incidents

Because data regarding the disciplinary incidents of inmates in Illinois was not automated statewide at all facilities prior to 1999, we included only those inmates admitted to prison in Illinois for murder and sex offenses between July 1999 and June 2001 in our sample to determine if TIS has any impact on the extent and nature of disciplinary incidents. In addition to including many of the same independent variables as used in the analyses of sentence length (i.e., age, race, gender, marital status, education level, if the inmate has children, gang membership, prior criminal history, and jurisdiction of sentencing, and a dummy variable to indicate if they were subject to TIS), we also included information about how long they were projected to serve in prison (sentence imposed, minus any jail credits and minus any good conduct credit they could potentially earn), length of time served, and the security level of the facility they were housed in. In the analyses, we also performed analyses substituting the security level of the facility with dummy variables for the actual facilities (i.e., Stateville, Pontiac, etc). However, because some individual facilities had very small numbers of cases, the ability to statistically control for the specific facility was limited. All of the independent variables were examined in bivariate analyses to check for multicollinearity and none of the correlations were found to be large enough for this to be a concern in the multivariate analyses.

In terms of the dependent variable, or the institutional disciplinary incidents, we created and examined a number of different measures, including: the total number of disciplinary incidents (a ratio-level measure), an indication of any “serious incidents” (coded as a dichotomous variable, 0=none, 1=1 or more), an indication of any assaults on staff (coded as a dichotomous variable), any assaults on other inmates (coded as a dichotomous variable), and any assaults (combining staff and inmate assaults, and coded as a dichotomous variable). The determination of a “serious incident” was based on a review of IDOC’s disciplinary procedures (Illinois Administrative Code, 2003), and the identification of offenses that could result in the most severe sanctions. Based on this review, serious offenses were defined as 100- and 500-level offenses (i.e., assaults and other violent offenses, and violating a state or federal law; and involvement in a security threat group activities). Table 1b summarizes the characteristics of the sub-samples used in the analyses of the disciplinary incidents among those convicted of murder and sex offenses.

Table 1b
Demographic, Socio-Economic and Criminal History Characteristics of Disciplinary Record
Analysis Sub-Sample

	Murder Disciplinary Incidents (N=849)	Class X Sex Offender Disciplinary Incidents (N=1,405)
Age	26.56	32.27
Race		
White	16.7%	40.2%
Non-White	83.3%	59.8%
Total	100.0%	100.0%
Gender		
Male	92.7%	99.4%
Female	7.3%	0.6%
Total	100.0%	100.0%
Marital Status		
Married/Common Law	9%	21.8%
Single/Divorced	91%	78.2%
Total	100.0%	100.0%
Education Level		
No HS/GED	58.8%	54.6%
HS/GED	41.2%	45.4%
Total	100.0%	100.0%
Children		
None	75.4%	74.7%
One or More	24.6%	25.3%
Total	100.0%	100.0%
Gang Member		
No	63%	83.8%
Yes	37%	16.2%
Total	100.0%	100.0%
Region of Illinois		
Cook County	75.4%	52.2%
Collar County	5.9%	11.5%
Other Metropolitan Statistical Area	10.4%	15.6%
Rural Area	8.4%	20.7%
Total	100.0%	100.0%
Prior Prison Sentences		
None	73.4%	77.2%
One or More	26.6%	22.8%
Total	100.0%	100.0%
Truth-in-Sentencing		
Non-TIS	65%	42.6%
TIS	35%	57.4%
Total	100.0%	100.0%

RESULTS & FINDINGS: IMPACT OF TIS ON SENTENCE LENGTH AND TIME TO SERVE

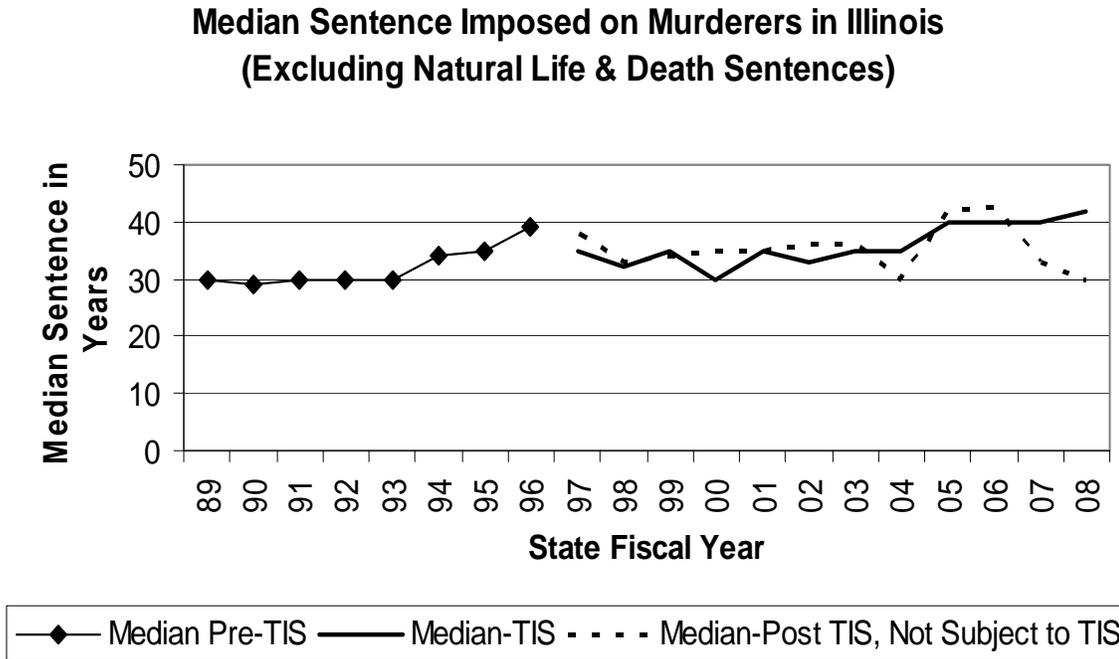
Results and Findings from the Analyses of the Impact of TIS on Sentence Length and Time to Serve for Convicted Murderers

The first set of analyses sought to merely examine the overall pattern of sentences imposed on convicted murderers in Illinois between SFY 1989 and 2008, including analyses of the mean and median sentences imposed (for determinate sentences), and the proportion of murderers that received sentences beyond the statutory maximum of 60 years. These analyses were performed so as to separate out, or distinguish between the sentences imposed prior to the implementation of TIS, those murder sentences that were subject to TIS, and those murderers sentenced after TIS had been implemented, but who were not eligible due to the fact that their crime occurred prior to the passage of the law.

From these analyses, a number of patterns were evident that have implications for understanding the potential impact of TIS on murder sentences. First is the fact that in the years leading up to the passage of TIS in Illinois, the mean and median sentences imposed on convicted murderers that received a determinate sentence (i.e., excluding natural life or death sentences) was increasing (Figure 1). As seen in Figure 1, between SFY 1989 and 1993, the median sentence length imposed on murderers given a determinate sentence was 30 years. However, beginning in 1994, which is when the federal government passed its own version of TIS and increasing attention was being paid to the issue of TIS in the United States and in Illinois, the median sentences imposed on murderers in Illinois began to increase. By SFY 1996, the year before Illinois passed its TIS law, the median sentence lengths imposed on convicted murderers in Illinois had increased to 39 years.³

³ When examining the impact of TIS on sentence lengths, the first thing that needed to be examined was the pre-TIS trend in sentence lengths. Examining the correlation between sentence length (only those 20-60 years) and year (1989-1996), Pearson's r was .18. When examined in a regression model, for each additional year, sentence lengths increased by .87 years ($t=8.6$, $p<.001$). Thus, it appeared that prior to the implementation of TIS in 1997 there was a trend of increased sentence lengths being imposed on murderers in Illinois independent of the effect of the other variables.

Figure 1



The other pattern evident from the analyses of median sentence lengths over time was that following the passage of TIS, the median sentence lengths of those subject to the law, as well as those not subject to the law, appeared to decrease slightly and the upward trend in sentence lengths stopped, at least up until the last few years included in the analyses. By SFY 2008, the median sentence imposed on murderers subject to TIS had increased back to the pre-TIS level in SFY 1996. The trend in the median sentence imposed on those sentenced after the TIS law, but not subject to TIS, becomes statistically unstable after SFY 2003 due to there being relatively few cases in the analyses after that point. Aggregating all of the sentences imposed between SFY 1997 and 2008, the median sentence imposed on those convicted of murder and subject to TIS was 35 years (mean of 38.3 years). For those murderers sentenced after TIS was implemented, but not subject to the law, the median sentence imposed was 35 years (mean of 39.3 years). Thus, without any statistical controls other than whether or not the murderer was subject to TIS indicates the mean and median sentences imposed on convicted murderers subject to TIS were only *slightly lower* than the sentences imposed pre-TIS and when compared to those sentenced after TIS but who were not subject to the law.

The next step of the analyses involved performing bivariate analyses to determine if there were any relationships between the sentence imposed (in years) and the proposed independent variables, including: age, race, gender, marital status, education level, if the inmate has children, gang membership, prior criminal history, and jurisdiction of sentencing. Following the bivariate analyses, multivariate analyses were also conducted to examine the impact of TIS on sentence lengths, while also statistically controlling for the other variables that could influence or change the lengths of sentences imposed on convicted murderers. Those offenders sentenced to natural life or death were not included in these analyses.

In the bivariate analyses, all independent variables revealed statistically significant relationships with sentence length, although not all variables displayed strong relationships to sentence length (Table 2). Further, the fact that statistically significant relationships were found is not necessarily that surprising given the large sample size being used. Specifically, we found that older inmates were more likely to receive longer sentences, although it was a weak relationship (Spearman's $\rho=.068$, $p<.001$). Also, females received shorter sentences than males (32.7 years compared to 38.2 years, respectively), and although this difference was statistically significant ($F=41.87$, $p<.001$), it was relatively weak (Spearman's $\rho=.092$, $p<.001$). Similarly, when race was coded into three categories (white, African-American, and Hispanic/other) a statistically significant difference in sentence lengths across the three groups was evident ($F=18.32$, $p<.001$). Specifically, white defendants received longer mean sentences (40.6 years) than African-American (37.6 years) and Hispanic/other inmates (36.6 years). Marital status was also related to sentence length, with married inmates receiving longer sentences, on average, than unmarried inmates (39.7 years compared to 38.3 years, respectively; $F=4.1$, $p<.05$). Those convicted murderers that had a high school diploma or GED received longer average sentences than those without a high school education (39.2 years compared to 37.8 years, respectively; $F=7.56$, $p<.01$). Also, inmates who had at least one child received longer average sentences than those without children (39 years versus 36.8 years, respectively; $F=29.6$, $p<.001$). Further, inmates who were gang members received longer sentences than non-members (38.8 years compared to 37.2 years, respectively; $F=14.2$, $p<.001$). Where an offender was convicted also had a statistical relationship with mean sentence length. Convicted murderers sentenced outside of Cook County received longer mean sentences than their counterparts in Cook County (43.3 years for the Collar Counties, 39.9 years for other Metropolitan Statistical

Areas, 41.6 years for Micropolitan Statistical Areas versus 36.8 years for Cook County; $F=31.6$, $p<.001$). Finally, murderers with prior incarcerations received longer mean sentences than those with no prior incarcerations (42.7 years versus 36.2 years, respectively; $F=193.0$, $p<.001$).

Table 2

Average Sentences Imposed on Those Convicted of Murder Excluding Life and Death Sentences

	Mean Sentence Length (in Years)
Total	37.88, (sd) 18.60
Age*** (26.72 years) Spearman's Rho=.069, $p<.001$	
Gender*** $F=41.87$, $p<.001$; Spearman=.092, $p<.001$	
Female	32.72, (sd) 15.70
Male	38.22, (sd) 18.72
Race*** $F=18.32$, $p<.001$	
White	40.64, (sd) 23.17
African-American	37.56, (sd) 17.99
Hispanic/Other	36.57, (sd) 15.53
Marital Status* $F=4.1$, $p<.05$; Spearman=.011, $p=.39$	
Married/Common Law	39.66, (sd) 24.48
Divorced/Single	38.27, (sd) 18.11
Education Level** $F=7.56$, $p<.01$; Spearman=.023, $p=.084$	
HS Diploma or GED	39.24, (sd) 22.57
No HS Diploma or GED	37.78, (sd) 17.21
Children*** $F=29.6$, $p<.001$; Spearman=.057, $p<.001$	
None	36.78, (sd) 16.89
1 or More	39.02, (sd) 20.15
Gang Member*** $F=14.18$, $p<.001$; Spearman=.064, $p<.001$	
No	37.24, (sd) 19.54
Yes	38.82, (sd) 17.06
Region of Illinois*** $F=31.57$, $p<.001$	
Cook County/Chicago	36.82, (sd) 17.41
Collar County	43.26, (sd) 20.63
Other Metropolitan Statistical Area	39.86, (sd) 23.81
Micropolitan Statistical Area	41.6, (sd) 16.71
Prior Prison Sentences*** $F=193$, $p<.001$; Spearman=.147, $p<.001$	
None	36.2, (sd) 16.57
One or More	42.68, (sd) 22.75
Truth-in-Sentencing*** $F=11.65$, $p<.001$	
Pre-TIS	36.83, (sd) 18.29
Non TIS	39.3, (sd) 22.58
TIS	38.32, (sd) 15.83

* $p<.05$, ** $p<.01$, *** $p<.001$

When all of these variables were included in the multivariate model, plus a trend variable to account for the pre-TIS trend of increasing sentence lengths and the variable indicating the TIS status of the offender (pre-TIS, TIS and post-TIS but not subject to TIS), we found that TIS was associated with a 3.9 year reduction in the mean sentence length (Appendix 1). In other words, once you statistically take into account the effect of the offender's age, race, gender, marital status, education level, if the inmate has children, gang membership, prior criminal history, jurisdiction of sentencing, and adjust for the pre-TIS trend in sentencing, TIS resulted in a decrease of 3.9 years on the average sentence imposed on murderers.⁴ Given the average murder sentence, this reduction translates into a 10.3 percent reduction in sentence lengths. Thus, while TIS did reduce the length of sentences imposed on convicted murderers *to some degree*, the decrease was nowhere near what some believed it would be (i.e., that sentences would be cut nearly in half to account for the fact that 100 percent will be served under TIS as opposed to the 50 percent served under the old law). Another way the impact of TIS can be considered is by looking at the actual amount of time that will be required to be served by those convicted of murder. Substituting the time to serve for the sentence length reveals that those subject to TIS are expected, on average, to serve 17 years longer in prison than those not subject to TIS after statistically controlling for the other variables in the analyses.

Impact of TIS on Murder Sentences Beyond the Statutory Maximum

The next set of analyses sought to determine if the TIS law was associated with any change in the likelihood that a convicted murderer would receive a sentence beyond the statutory maximum of 60 years. Under Illinois law, a sentence beyond the statutory maximum, or a sentence of natural life or death in the case of murder, can be sought when specific, aggravating circumstances are present. As described previously, the hypothesis and potential impact of TIS as it relates to sentences above the statutory maximum, or of natural life and death in murder cases, is that prior to TIS, the maximum sentence that could be imposed on murder without proving aggravating circumstances was 60 years, which, with good conduct credit would translate to 30 years in prison. Thus, for a 30-year-old murderer, odds are they would be released from prison before their death (i.e., they would be 60 years old). If the prosecutor wanted to ensure that this individual would not be released from prison,

⁴ When the model was rerun using a logarithmic transformation of the dependent variable to account for the slight skew in sentences, the results were consistent. Specifically, TIS was associated with an 8 percent reduction in the sentence imposed on convicted murderers.

they would need to prove to the judge that aggravating circumstances were present in order to achieve a projected age of release from IDOC beyond the typical life expectancy (i.e., 70 or 80 years old). However, with TIS, and a 30 year old convicted murderer, it would now be possible to impose a veritable “life” sentence by sentencing them to IDOC for 60 years, which under TIS would require the full 60 years to be served, resulting in that inmate not being eligible for release until the age of 90.

Similar to the analyses of mean and median sentences imposed on the determinate sentences, we also performed time series analyses to determine if there were any changes during the period included in the analyses (SFY 1989 to 2008) in the proportion of murderers receiving sentences beyond the 60 year maximum (including determinate sentences of more than 60 years, plus natural life or a death sentence), and these analyses were performed so as to separate out, or distinguish between the sentences imposed prior to the implementation of TIS, those murder sentences that were subject to TIS, and those murderers sentenced after TIS had been implemented, but who were not eligible due to the fact that their crime occurred prior to the passage of the law. Unlike the findings from the analyses of median sentence lengths pre-TIS, we did not detect any noticeable trend leading up to the passage of TIS in the proportion of murderers given sentences beyond the statutory maximum. Between SFY 1989 and 1996, roughly 25 percent of convicted murderers received a sentence beyond the statutory maximum of 60 years, and most of these were sentences of natural life (498 of the 879 sentences beyond the statutory maximum). Among those subject to TIS, on the other hand, a much smaller proportion of convicted murderers have received a sentence beyond the statutory maximum (17 percent). Further, among those sentenced after TIS was passed, but who were not subject to it due to having committed their crime prior to the law, 17.4 percent were given sentences beyond the statutory maximum. Thus, the bivariate analyses would suggest that offenders subject to TIS are *less likely* than those murderers sentenced pre-TIS to get a sentence beyond the statutory maximum, whereas those murderers sentenced post-TIS, but not subject to the law, were *more likely* to receive a sentence beyond the statutory maximum than pre-TIS.

As with the analyses of determinate sentences, multivariate analyses were performed to examine the impact of TIS on the likelihood of a sentence beyond the statutory maximum after statistically controlling for other variables. Before these analyses were performed, however, bivariate analyses

examining the relationship between the type of sentence imposed (20-60 years versus 61 or more years/natural life/death) and the independent variables were performed. As seen in Table 3, there were statistically significant, although relatively weak, relationships between the sentence and offender age (older more likely to get sentence beyond 60 years), gender (males more likely to get a sentence beyond 60 years), race (whites more likely to get sentence beyond 60 years), education level (those with higher levels of education more likely to get sentence beyond 60 years), prior prison sentences (those with at least 1 prior prison sentence more likely to get sentence beyond 60 years), and where the offender was convicted (those convicted outside of Chicago/Cook County more likely to get a sentence beyond 60 years).

When multivariate analyses using logistic regression were performed in order to statistically control for the other independent variables, a generally consistent pattern emerged: those subject to TIS were *less likely* to receive a sentence beyond 60 years (relative to the pre-TIS group as well as relative to those convicted during the same time period but not subject to the law). For example, after statistically controlling for the age, race, gender, education level, marital status, gang membership, having children, prior prison sentences and jurisdiction where conviction occurred, those subject to TIS were 57 percent *less likely* to receive a sentence of more than 60 years than those sentenced prior to TIS. On the other hand, those sentenced post-TIS, but not subject to the law, were not any more or less likely to receive a sentence beyond 60 years when compared to those sentenced pre-TIS or those subject to TIS, after statistically controlling for the effect of the other variables.⁵

⁵ The amount of jail time was included as an independent variable and was intended to measure how long the case took to dispose. Thus, jail time was a proxy for the complexity or seriousness of the case (i.e., the longer to dispose of, theoretically the more complex, and potentially more likely to involve a jury trial).

Table 3

Comparison of Demographic, Socio-Economic and Criminal History Characteristics Among Those Sentenced to Less than 61 years versus 61+ years (or life, or death)

	Sentenced to 20-60 years	Sentenced to 61+ years, or receiving Life or Death Sentence	Total
Total	76.9%	23.1%	100%
Age*** (Mean, Years) F=115, p<.001	26.5	28.9	27.1
Gender*	X ² =15.72, 1df, p<.001, Phi=.04 p<.001		
Female	83.9%	16.1%	100%
Male	76.5%	23.5%	100%
Race***	X ² =94.75, 2df, p<.001, Cramer's V=.10, p<.001		
White	68.3%	31.7%	100%
African-American	77.8%	22.2%	100%
Hispanic/Other	82.7%	17.3%	100%
Marital Status**	X ² =8.69, 1df, p<.01, Phi=.04, p<.01		
Married/Common Law	72%	28%	100%
Divorced/Single	76.3%	23.7%	100%
Education Level***	X ² =27.07, 1df, p<.001, Phi=.07, p<.001		
HS Diploma or GED	72%	28%	100%
No HS Diploma or GED	77.7%	22.3%	100%
Children***	X ² =22.36, 1df, p<.001, Phi=.05, p<.001		
None	79%	21%	100%
1 or More	74.8%	25.2%	100%
Gang Member	X ² =.948, 1df, p=.330		
No	77.3%	22.7%	100%
Yes	76.4%	23.6%	100%
Region of Illinois***	X ² =127.28, 3df, p<.001, Cramer's V=.12, p<.001		
Cook County/Chicago	79.8%	20.2%	100%
Collar County	66.6%	33.4%	100%
Other Metropolitan Statistical Area	71%	29%	100%
Rural Area	66.4%	33.6%	100%
Prior Prison Sentence***	X ² =198.37, 1df, p<.001, Phi=.15, p<.001		
None	80.7%	19.3%	100%
One or More	66.8%	33.2%	100%
Truth-in-Sentencing***	X ² =78.95, 2df, p<.001, Cramer's V=.09, p<.001		
Pre-TIS	75.4%	24.6%	100%
Non TIS	73.4%	26.6%	100%
TIS	82.9%	17.1%	100%

* p<.05, ** p<.01, *** p<.001

Thus, our analyses regarding the impact of TIS on murder sentences revealed two substantial findings, which have considerable implications: 1) the average determinate sentence imposed on convicted murderers was reduced *only slightly* as a result of TIS, resulting in offenders serving much longer periods of time in prison, and 2) TIS appears to have reduced the use (or need) to impose sentences beyond the statutory maximum of 60 years. Thus, the passage of TIS has dramatically increased the *actual amount* of time those convicted of murder will spend in prison, and as a result, the cost per murder sentence imposed in Illinois dramatically increased as a result of TIS.

Specifically, among those who received a determinate sentence (i.e., excluding natural life and death sentences), TIS was associated with an average increase of 18 years of time to serve compared to pre-TIS. Using current dollar costs of incarceration in Illinois, and not including any construction costs, the average annual cost to incarcerate an adult in prison is \$22,622 (Illinois Department of Corrections, 2005). Thus, the average cost for incarceration in prison *per murder sentence* pre-TIS was roughly \$400,409 (annual cost of incarcerate per inmate of \$22,622 multiplied by the average length of time to serve of 17.7 years). By comparison, the average cost for incarceration in prison per murder sentence under TIS is roughly \$816,600 (annual cost per inmate multiplied by average length of time to serve of 36.1 years).

In addition to longer periods of incarceration, and therefore higher costs, a much larger proportion of convicted murderers in Illinois will now serve the rest of their life in prison, despite the fact that the actual imposition of natural life sentences has been reduced due to TIS. Because the lengths of time to serve in prison increased so much as a result of TIS, it is projected that 30 percent (886 of the 3,000 sentenced under TIS) of all inmates convicted of murder and subject to TIS will not be eligible for release until after their 75th birthday--the average life expectancy of males in the United States (CDC). However, while 30 percent of murderers sentenced under TIS received sentences that will result in them most likely spending the rest of their life in prison, only a small proportion of these were explicit “natural life” or “death” sentences. Of all the murderers sentenced under TIS and projected to be in prison beyond their 75th birthday, only 13 percent (117/886) had a “natural life” or “death” sentence imposed by the court. By comparison, pre-TIS, only 15 percent of all convicted murderers (627/4,198) received a sentence that would keep them in prison beyond their 75th birthday, and almost all of these (90 percent or 564/627) were court-imposed sentences of “natural life” or “death.” Further, to achieve these sentences of natural life or death, the prosecution had to

prove aggravating circumstances that would allow for the imposition of these sentences.

Impact of TIS on the Sentences Imposed on Sex Offenders

Analyses similar to those performed to examine the impact of TIS on murder sentences were performed to examine the impact of TIS on the sentence lengths of those convicted of aggravated criminal sexual assault. Specifically, we first examined the overall trends in mean and median sentences imposed on those convicted of Class X felony sex offenses (aggravated criminal sexual assault and predatory criminal sexual assault) over time, distinguishing between the TIS-eligible offenders as well as the post-TIS offenders who were ineligible for TIS due to the timing of their offense. Excluded from these analyses were sex offenders that received either natural life sentences or who were sentenced as sexually dangerous persons (SDP) due to the inability to quantify the sentence length in these cases. However, natural life and SDP cases accounted for a very small number of the Class X sex offenders sentenced during the time period examined (12 of the 1,405).

During the time period leading up to the passage of TIS in Illinois, no discernable trend in the mean or median sentence length of those convicted of Class X felony sex offenses in Illinois were evident. The average sentence imposed on Class X sex offenders pre-TIS was 13.5 years. By comparison, among those subject to TIS, the mean sentence length was slightly shorter (12.5 years), and among those sex offenders sentenced post-TIS but not subject to the law, the mean sentence length was just over 13.5 years.

Prior to performing multivariate analyses to examine the impact of TIS on the sentence lengths of sex offenders, bivariate analyses were performed between the independent variables—similar to those used in analyses of murder sentences-- and the sentence length (Table 4). The offender's age, race, educational attainment, having a child, gang status, and prior prison sentences were all found to be statistically related to the mean sentence length. Older Class X sex offenders received longer sentences, on average, although this was a fairly weak relationship (Spearman's $\rho = .135$, $p < .001$). When race was analyzed in three categories (white, African-American and Hispanic/other), it was statistically related to sentence length ($F = 23.43$, $p < .001$). It was found that African-Americans received longer sentences (13.6 years) than whites (12.9 years) and Hispanic/other offenders (11.3

years). Educational attainment was also statistically related to sentence length for Class X sex offenders ($F=3.5$, $p<.10$). Offenders who had a high school education received slightly longer sentences than those without a high school diploma or GED (13.7 years versus 13.2 years). Whether or not an offender had children was also statistically significant ($F=47.6$, $p<.001$). Offenders who had at least one child received longer mean sentences than those without children (13.7 years versus 12.2 years, respectively), although this was a weak relationship (Spearman's $\rho=.092$, $p<.001$). Similarly, an offender's gang status was statistically related to sentence length ($F=88.52$, $p<.001$), with gang members receiving longer mean sentences than non-members (15.2 years versus 12.5 years, respectively; Spearman's $\rho=.096$, $p<.01$). Further, a Class X sex offender's prior prison sentences were found to be statistically related to sentence length ($F=456.5$, $p<.001$). Offenders with at least one prior prison sentence received a mean sentence of 17.1 years, compared to a mean of 11.6 years for those without a prior prison sentence. The relationship between prior prison sentences and sentence length for sex offenders was stronger than the other relationships found, but still relatively weak (Spearman's $\rho=.241$, $p<.001$).

When all of these variables were included in the multivariate model, plus the variable indicating the TIS status of the offender (pre-TIS, TIS and post-TIS but not subject to TIS), we found that TIS was associated with a slight reduction in the mean sentence length of approximately .51 years (i.e., roughly 6 months shorter) (Appendix 2). It does not appear that those sentenced after the TIS law, but who were not subject to it, experienced any change or difference in sentence lengths than did those sentenced pre-TIS. In other words, once you statistically take into account the effect of the offender's age, race, gender, marital status, education level, if the inmate has children, gang membership, prior criminal history, and jurisdiction of sentencing, TIS resulted in a decrease of 0.5 years on the average sentence imposed on Class X sex offenders. Thus, while TIS did reduce the length of sentences imposed on convicted sex offenders to some degree, the decrease was nowhere near what some believed it would be (i.e., that sentences would be cut dramatically to account for the fact that 85 percent will be served under TIS as opposed to the 50 percent served under the old law).

Table 4
Average Sentences Imposed on Those Convicted of Class X Sex Offenses, Excluding Life Sentences
and Finding of Sexually Dangerous Person

	Mean Sentence Length (in Years)
Total	12.98, (sd) 9.56
Age*** (32.45 years) Spearman=.135, p<.001	
Gender F=.332, p=.565	
Female	12.23, (sd) 9.42
Male	12.99, (sd) 9.55
Race*** F=23.43, p<.001	
White	12.88, (sd) 8.75
African-American	13.64, (sd) 10.62
Hispanic/Other	11.32, (sd) 8.00
Marital Status F=2.5, p=.114	
Married/Common Law	13.07, (sd) 9.61
Divorced/Single/Widower	13.55, (sd) 10.09
Education Level F=3.5, p<.10	
HS Diploma or GED	13.68, (sd) 9.87
No HS Diploma or GED	13.16, (sd) 9.99
Children*** F=47.6, p<.001; Spearman=.092, p<.001	
None	12.17, (sd) 8.88
1 or More	13.74, (sd) 10.1
Gang Member*** F=88.52, p<.001; Spearman=.096, p<.001	
No	12.47, (sd) 8.95
Yes	15.2, (sd) 11.61
Region of Illinois F=1.42, p=.234	
Cook County/Chicago	12.85, (sd) 10.14
Collar County	12.65, (sd) 8.61
Other Metropolitan Statistical Areas	13.46, (sd) 8.65
Rural Areas	12.87, (sd) 8.65
Prior Prison Sentences*** F=456.50, p<.001; Spearman=.241, p<.001	
None	11.64, (sd) 8.01
One or More	17.13, (sd) 12.37
Truth-in-Sentencing*** F=5.87, p<.001	
Pre-TIS	13.16, (sd) 10.23
Non TIS	13.68, (sd) 10.59
TIS	12.54, (sd) 8.25

* p<.05, ** p<.01, *** p<.001

Logistic regression analyses were also performed to examine if the TIS law had any impact on the use of sentences beyond the statutory maximum (i.e., more than the 30 years generally allowable for Class X felonies). Using the same independent variables as described above, the TIS-status did not have any statistically significant effect on the imposition of a sentence beyond the 30 year maximum, and is most likely due to the relatively low prevalence of these types of sentences in general. As described previously, only about 5 percent of all Class X sex offenders received a sentence beyond the 30 year maximum pre-TIS, and among those subject to TIS, the prevalence of these sentences were also quite rare (i.e., 4 percent of all Class X felony sex offense TIS sentences). Thus, the impact of TIS on the sentence lengths and lengths of time to serve for sex offenders is somewhat similar to that seen with convicted murderers, although to a lesser degree due to the sentence lengths involved. Still, as a result of TIS, convicted Class X sex offenders are now serving substantially longer periods of incarceration than they did pre-TIS. On average, those sex offenders subject to TIS will serve an average of 9.7 years in prison, compared to the roughly 6.2 years those sentenced prior to TIS served, as well as those sentenced after the TIS law but who were not subject to the law. As a result, the average at release for sex offenders subject to TIS will be roughly 42 years old, compared to an average age at release of 38 for those sentenced pre-TIS. Thus, although there was an increase in the length of time served as a result of TIS for sex offenders, and a subsequent increase in the average age at release, it was nowhere near the magnitude of the increased time served for convicted murderers as a result of TIS and it did not have the kind of impact on age at release and likelihood of dying in prison prior to release as did the TIS law for murderers.

RESULTS & FINDINGS FROM ANALYSES OF IMPACT OF TIS ON DISCIPLINARY INCIDENTS

Impact of TIS on Disciplinary Incidents for Murderers

To determine if TIS had an impact on the extent and nature of disciplinary incidents among murderers in Illinois, data were obtained that allowed for the tracking of disciplinary incidents for a cohort of murderers admitted to prison in Illinois between July 1999 and June 2001. Disciplinary data included those recorded through March 2008, so the average amount of time inmates were at risk of having a disciplinary incident was 8 years. Within the sample of murderers tracked were 300 inmates subject to TIS and 550 that were eligible for day-for-day good conduct credit. The specific disciplinary outcomes examined included: total number of disciplinary tickets, any serious incident (yes or no), any assaults (yes or no), assaults of staff (yes or no), and assaults of other inmates (yes or no). Analyses included bivariate comparisons of inmate characteristics, including whether the inmate was subject to TIS or not, and each of these different measures of disciplinary incidents. Below is a description of the findings from each set of these bivariate analyses as well as a summary of the multivariate models tested to examine the effect of TIS on each measure of institutional rule violations.

Impact of TIS on the Total Number of Disciplinary Incidents on Murderers

Bivariate analyses were performed to determine if there was any statistical relationship between inmate characteristics, including whether they were subject to TIS, and the total *number* of disciplinary tickets (Table 5). With respect to the TIS status of the inmate, the bivariate analyses indicated that inmates who were not subject to TIS averaged 26.75 disciplinary tickets, compared to an average of 18.06 tickets for TIS inmates ($F=25.45$, $p<.001$). Thus, the bivariate analyses suggest that TIS offenders have *fewer disciplinary incidents*, on average, than inmates not subject to TIS.

In addition, there were also statistically significant relationships between number of disciplinary tickets and the inmate's age, gender, race, education level, gang membership, region of Illinois where the inmate was from, projected time to serve, and facility security level. Specifically, female inmates averaged 42.4 disciplinary tickets, compared to 20.5 for males ($F=56.9$, $p<.001$), which ,ay

potentially be explained by differences in the recording of disciplinary incidents between male and female facilities. African-American inmates had an average of 23.4 disciplinary tickets, compared to 21.1 per Hispanic inmate and 17.4 for white inmates ($F=4.12$, $p<.05$). Similarly, inmates with no high-school diploma/GED averaged 25.9 disciplinary tickets, whereas those with a high-school diploma/GED averaged 19.6 tickets ($F=3.91$, $p<.05$). Similarly, gang members had an average of 23.7 tickets, compared to 21 for non-gang members ($F=3.06$, $p<.10$). Inmates from more populous areas of Illinois averaged higher numbers of disciplinary tickets than inmates from other areas, with Cook County inmates averaging 23, “collar” county inmates averaging 19.8, and inmates from other Metropolitan Statistical Areas averaging 21.1, compared to an average of 13.7 disciplinary tickets for inmates from Micropolitan Statistical Areas, and a mean of 15.8 for inmates from all other areas of Illinois ($F=2.13$, $p<.10$). Facility security level was also statistically related to average number of disciplinary tickets. Inmates in medium security (level 4) facilities averaged 37.13 tickets, compared to 20.4 tickets for maximum security (level 1) inmates, 25.8 for secure medium (level 2) inmates, 22.6 for high medium (level 3) inmates, and 13.25 for high minimum (level 5) inmates ($F=6.64$, $p<.001$). A statistically significant relationship was also evident in the comparison of inmate age and the number of disciplinary tickets, with younger inmates having more tickets (Spearman’s $Rho=-.364$, $p<.001$). Finally, a statistically significant relationship between the number of disciplinary tickets an inmate received and the projected length of time they have to serve was found. Inmates with shorter projected sentences were found to have more disciplinary tickets (Spearman’s $Rho=-.351$, $p<.001$). On the other hand, no statistical relationship was found between number of tickets and marital status, whether or not they had children, and prior prison sentences.

Table 5
Average Number of Disciplinary Tickets Received by Those Convicted of Murder

	Mean Number of Disciplinary Tickets
Total	22.02, (sd) 21.68
Age*** (26.56 years) Spearman=-.364, p<.001	
Gender*** F=56.90, p<.001	
Female	42.43, (sd) 48.57
Male	20.52, (sd) 17.35
Race** F=6.93, p<.01	
White	17.39, (sd) 27.02
Non-White	22.88, (sd) 20.46
Race 2* F=4.12, p<.05	
White	17.39, (sd) 27.02
African-American	23.38, (sd) 21.00
Hispanic/Other	21.13, (sd) 18.43
Marital Status F=1.93, p=.166	
Married/Common Law	16.11, (sd) 11.37
Divorced/Single	23.42, (sd) 27.63
Education Level* F=3.91, p<.05	
HS Diploma or GED	19.58, (sd) 24.63
No HS Diploma or GED	25.86, (sd) 28.96
Children F=.381, p=.537	
None	22.29, (sd) 20.19
1 or More	21.19, (sd) 25.85
Gang Member F=3.06, p=.08	
No	21.00, (sd) 22.58
Yes	23.74, (sd) 20.00
Region of Illinois F=2.13, p=.075	
Cook County/Chicago	23.01, (sd) 21.27
Collar County	19.78, (sd) 16.89
Other Metropolitan Statistical Areas	21.13, (sd) 29.82
Micropolitan Statistical Areas	13.67, (sd) 11.65
All Other Areas	15.81, (sd) 14.32
Prior Prison Sentences F=2.65, p=.104	
None	22.75, (sd) 22.34
One or More	19.92, (sd) 19.55
TIS*** F=25.45, p<.001	
Non TIS	26.75, (sd) 21.86
TIS	18.06, (sd) 21.04

Projected Time to Serve*** (33.69 years) Spearman=-.351, p<.001	
Actual Time Served*** (7.73 years) Spearman=.122, p<.001	
Facility Security Level*** F=6.64, p<.001	
Maximum	20.40, (sd) 19.48
Secure Medium	25.80, (sd) 17.15
High Medium	22.60, (sd) 23.57
Medium	37.13, (sd) 45.79
High Minimum	13.25, (sd) 12.47

* p<.05, ** p<.01, *** p<.001

Multivariate analyses were also conducted in order to more accurately determine which variables had an independent impact on the numbers of disciplinary tickets received among the sample of murderers, and also to determine the impact of TIS while statistically controlling for the other variables associated with the number of disciplinary incidents. The first ordinary least squares (OLS) regression model for murder offenders included the independent variables for age at admission, projected time to serve in years, actual years served, gender, race as a dichotomous variable (white or non-white), marital status (married or not married), whether or not the offender had children, educational attainment (HS/GED or no HS/GED), gang status, area where they were sentenced (Cook or non-Cook), whether or not they were previously admitted to prison, the security level of their institution (maximum or other), and whether or not they were subject to TIS. This model was found to be statistically significant at the p<.001 level, with an R² of .188 and an adjusted R² of .175.

Of the 13 independent variables in this model, six were found to be statistically significant. Age at admission (p<.001) was inversely related to total number of tickets. For every year older an offender was, he or she could expect to receive .6 fewer disciplinary tickets (B=-.559). As well, for every year longer an offender was projected to serve (p<.005), he or she could expect to receive .1 fewer disciplinary tickets (B=-.094). On the other hand, for every year longer that an offender had actually served (p<.05), he or she could expect to receive 1.3 more disciplinary tickets (B=1.29). Gender had the strongest impact on the total number of tickets an offender received (N=553, p<.001; Beta=-.322). Male murder offenders could expect to receive about 28 fewer tickets than female murder offenders (N=8,664; B=-27.56). The security level of the offender's parent institution was also significantly related to total number of tickets received (p<.10), with offenders not in maximum

security receiving 3 fewer tickets than maximum security offenders ($B=-3.14$). Finally, an offender's status as TIS ($p<.005$) was also related to fewer disciplinary tickets, with TIS offenders *receiving almost 5 fewer tickets*, on average, than non-TIS inmates ($B=-4.67$). (See Appendix 3)

Impact of TIS on the Prevalence of "Serious" Incidents among Murderers

Bivariate analyses were also performed to determine if there was any statistical relationship, and if so, the strength of that relationship, between inmate characteristics, including whether they were subject to TIS, and whether or not the inmate received a disciplinary ticket for a serious incident (Table 6). Serious incidents were defined as any offenses that carry a maximum penalty of one year of loss or restriction of privileges, grade reduction, good time revocation and/or segregation. Offenses in this category range from violent assaults to participation in a security threat group or unauthorized organization. No statistically significant difference was noted between murderers subject to TIS and those not subject to TIS, with approximately 53 percent of both groups receiving a ticket for a serious incident.

On the other hand, there was a statistically significant relationship between receipt of a ticket for a serious incident and the inmate's age, race, education level, gang membership, and the security level of their institution. Specifically, younger inmates were more likely to have a serious violation, with the mean age of 24.8, compared to 28.1 for those with no serious incidents ($F=31.1$, $p<.001$). Non-white inmates were more likely than whites to have received a ticket for a serious incident (56 percent versus 40 percent, respectively) ($X^2=11.06$, 1df, $p<.001$), although the strength of the relationship was relatively weak ($\Phi=.12$, $p<.001$). Similarly, inmates without a high-school diploma/GED were more likely than those with a high-school diploma/GED to have had a serious incident (56 percent versus 43 percent, respectively; $X^2=5.2$, 1df, $p<.05$), although the strength of the relationship was relatively weak ($\Phi=.13$, $p<.05$). Inmates identified as gang members were more likely than non-gang members to have received a ticket for a serious incident (61 percent versus 50 percent, respectively; $X^2=9.5$, $p<.01$), and the strength of the relationship was weak ($\Phi=.11$, 1df, $p<.01$). Finally, inmates in higher-security institutions were more likely to receive a ticket for a serious incident (57 percent for maximum security inmates and 52 percent for secure medium inmates, compared to 38 percent for high medium, 39 percent for medium, and 0 percent for high

minimum; $X^2=16.67$, 4df, $p<.01$). However, this was also a relatively weak relationship (Cramer's $V=.143$, $p<.01$). No statistical relationship was found between receipt of a ticket for a serious incident and inmate gender, marital status, whether or not they had children, the region of Illinois where they were from, prior prison sentences, projected time to serve and, as noted before, whether or not they were subject to TIS.

Table 6

Comparison of Demographic, Socio-Economic and Criminal History Characteristics among Murderers with No Serious Offenses and Those with at Least One Serious Offense

	No "Serious" Offenses	One or More "Serious" Offenses	Total
Total	46.3%	53.7%	849
Age*** (Mean, Years) $F=31.13$, $p<.001$	28.11	24.83	26.34
Gender	$X^2 =1.27$, 1df, $p=.260$		
Female	53.6%	46.4%	100%
Male	45.8%	54.2%	100%
Race***	$X^2 =11.06$, 1df, $p<.001$, $\Phi=.116$, $p<.001$		
White	59.8%	40.2%	100%
Non-White	43.8%	56.2%	100%
Race 2**	$X^2 =11.74$, 2df, $p<.01$, Cramer's $V=.120$, $p<.01$		
White	59.8%	40.2%	100%
African-American	44.7%	55.3%	100%
Hispanic/Other	40.9%	59.1%	100%
Marital Status	$X^2 =.170$, 1df, $p=.680$		
Married/Common Law	53.6%	46.4%	100%
Divorced/Single	49.5%	50.5%	100%
Education Level*	$X^2 =5.22$, 1df, $p<.05$, $\Phi=.131$, $p<.05$		
HS Diploma or GED	57.3%	42.7%	100%
No HS Diploma or GED	44.0%	56.0%	100%
Children	$X^2 =1.61$, 1df, $p=.204$		
None	45.1%	54.9%	100%
1 or More	50.3%	49.7%	100%
Gang Member**	$X^2 =9.54$, 1df, $p<.01$, $\Phi=.108$, $p<.01$		
No	50.5%	49.5%	100%

Yes	39.3%	60.7%	100%
Region of Illinois	$X^2=5.04, 4df, p=.283$		
Cook County/Chicago	44.3%	55.7%	100%
Collar County	50.0%	50.0%	100%
Other Metropolitan Statistical Area	51.2%	48.8%	100%
Micropolitan Statistical Area	57.1%	42.9%	100%
All Other Areas	57.1%	42.9%	100%
Prior Prison Sentence	$X^2 =.123, 1df, p=.725$		
None	46.0%	54.0%	100%
One or More	47.4%	52.6%	100%
Projected time to Serve (Mean Years) $F=2.08, p=.150$	32	34.93	33.57
Truth-in-Sentencing	$X^2=.165, 4df, p=.685$		
No	43.2%	56.8%	100%
Yes	44.8%	55.2%	100%
Security Level of Institution**	$X^2=16.67, 4df, p<.01, \text{Cramer's } V=.143, p<.01$		
Maximum	43.0%	57.0%	100%
Secure Medium	48.2%	51.8%	100%
High Medium	61.9%	38.1%	100%
Medium	60.5%	39.5%	100%
High Minimum	100.0%	0.0%	100%
Time Served (Mean Years)* $F=6.35, p<.05$	7.65	7.85	7.76

* $p<.05$, ** $p<.01$, *** $p<.001$

Analyses were also performed to examine the relationship between the *number* of serious incidents and inmate characteristics and whether the inmate was subject to TIS. No statistical relationship was found between the number of serious incidents among the murderers and whether they were subject to TIS. However, as with the analyses of whether or not the inmate received any tickets for serious incidents (i.e., dichotomous indication of yes or no), there were statistically significant differences in the average number of serious incidents and the inmates' race, number of children, gang involvement, and their institution's security level. Specifically, Hispanic inmates had an average of 1.56 serious incidents, compared to 1.18 per African-American inmate and .95 for white inmates ($F=4.08, p<.05$). Similarly, inmates with no children averaged 1.31 serious incidents, whereas those with at least one child had .92 serious incidents ($F=6.8, p<.01$). This was a weak relationship, with

Spearman's $Rho=.08$, with $p<.05$. Similarly, gang members had an average of 1.57 serious incidents, compared to 1.01 for non-gang members ($F=18.1$, $p<.001$), although this was a weak relationship as well (Spearman's $Rho=.15$, $p<.001$). Once again, inmates in higher-security institutions averaged more serious incidents. Maximum security inmates averaged 1.33 and secure medium inmates averaged 1.02, while high medium inmates averaged .83, medium inmates averaged .84, and high minimum inmates had 0 ($F=2.46$, $p=.044$). As with the dichotomous analysis, a statistically significant relationship was evident in the comparison of inmate age and the number of serious incidents, with younger inmates having more serious incidents (Spearman's $Rho=-.25$, $p<.001$). A relationship was also found between the projected time to serve and number of serious incidents, although it was weak (Spearman's $Rho=.064$, $p<.10$).

Consistent with the comparison made with the serious incident as a dichotomous variable, no statistical relationship was found between the number of tickets for a serious incident and inmate gender, marital status, the region of Illinois where they were from, prior prison sentences, and, as already noted, whether or not they were subject to TIS. Thus, in the multivariate analyses of any serious incident (i.e., a dichotomous variable using logistic regression) and of the number of serious incidents (i.e., a ratio-level variable using ordinary least squares regression), the TIS variable was not statistically related to whether or not the inmate received a ticket for a serious incident or the number of tickets for serious incidents

Impact of TIS on the Prevalence of Assaults by Murderers

Bivariate and multivariate analyses were also performed to determine if there was any statistical relationship, and if so, the strength of that relationship, between inmate characteristics, including whether they were subject to TIS, and whether or not the inmate received a disciplinary ticket for any assault (Table 7). No statistically significant differences were noted between murderers subject to TIS and those that were not, with roughly 19 percent of both groups receiving a disciplinary ticket for an assault. On the other hand, among the sample of offenders sentenced to IDOC for murder, there were statistically significant relationships between receipt of a ticket for any assault and the inmate's age and gang membership. Specifically, younger inmates were more likely to have received a disciplinary ticket for assault, with a mean age of 24.2, compared to 26.8 for those with no assaults

($F=11.4$, $p<.005$). Similarly, inmates identified as gang members were more likely than non-gang members to have received a ticket for any assault (23 percent versus 16 percent, respectively), but the strength of the relationship was weak ($\Phi=.09$, $p<.05$). No statistical relationships, however, were found between receipt of a ticket for any assault and inmate gender, race, marital status, education level, whether or not they had children, the region of Illinois where they were from, prior prison sentences, projected time to serve and, as indicated previously, whether or not they were subject to TIS.

Table 7
Comparison of Demographic, Socio-Economic and Criminal History Characteristics among Murderers with No Assaults and at Least One Assault

	No Assaults	One or More Assaults	Total
Total	81.7%	18.3%	100%
Age*** (Mean, Years) $F=11.35$, $p<.001$	26.81	24.22	26.34
Gender	$X^2 =.007$, 1df, $p=.936$		
Female	82.1%	17.9%	100%
Male	81.7%	18.3%	100%
Race	$X^2 =1.10$, 1df, $p=.295$		
White	85.0%	15.0%	100%
Non-White	81.1%	18.9%	100%
Race 2	$X^2 =1.58$, 2df, $p=.453$		
White	85.0%	15.0%	100%
African-American	81.7%	18.3%	100%
Hispanic/Other	79.2%	20.8%	100%
Marital Status	$X^2 =.010$, 1df, $p=.919$		
Married/Common Law	82.1%	17.9%	100%
Divorced/Single	81.4%	18.6%	100%
Education Level	$X^2 =1.083$, 1df, $p=.298$		
HS Diploma or GED	83.9%	16.1%	100%
No HS Diploma or GED	79.1%	20.9%	100%
Children	$X^2 =.174$, 1df, $p=.676$		
None	81.4%	18.6%	100%
1 or More	82.7%	17.3%	100%
Gang Member*	$X^2 =6.21$, 1df, $p<.05$, $\Phi=.087$, $p<.05$		

No	84.3%	15.7%	100%
Yes	77.4%	22.6%	100%
Region of Illinois 2	$X^2=3.82, 4df, p=.431$		
Cook County/Chicago	81.9%	18.1%	100%
Collar County	78.3%	21.7%	100%
Other Metropolitan Statistical Area	82.1%	17.9%	100%
Micropolitan Statistical Area	95.2%	4.8%	100%
All Other Areas	76.2%	23.8%	100%
Prior Prison Sentence	$X^2 =.347, 1df, p=.556$		
None	82.2%	17.8%	100%
One or More	80.4%	19.6%	100%
Projected time to Serve (Mean Years) $F=.150, p=.699$	33.76	32.74	33.57
Truth-in-Sentencing	$X^2=.008, 1df, p=.931$		
No	80.7%	19.3%	100%
Yes	81.0%	19.0%	100%
Security Level of Institution	$X^2=1.74, 4df, p=.784$		
Maximum	81.3%	18.7%	100%
Secure Medium	80.7%	19.3%	100%
High Medium	82.5%	17.5%	100%
Medium	86.8%	13.2%	100%
High Minimum	100.0%	0.0%	100%
Time Served (Mean, Years) $F=.882, p=.348$	7.74	7.84	7.76

* $p<.05$, ** $p<.01$, *** $p<.001$

Analyses were also performed to examine the relationship between the *number* of assaults and inmate characteristics. As with the analyses of whether or not the inmate received any tickets for assault (i.e., dichotomous indication of yes or no), there were statistically significant differences in the average number of assaults and the inmates' age and gang involvement. Specifically, gang members had an average of .35 assaults, compared to .24 for non-gang members ($F=2.9, p<.1$). A statistically significant relationship was evident in the comparison of inmate age and the number of assaults, with younger inmates having more assaults (Spearman's $Rho=-.134, p<.001$). Also consistent with the comparison made with the assaults as a dichotomous variable, no statistical relationship was found between the number of tickets for assault and inmate gender, race, marital status, education level, whether or not they had children, the region of Illinois where they were from,

prior prison sentences, projected time to serve and whether or not they were subject to TIS.

The analyses also examined separately the prevalence and patterns of assaults specifically against IDOC staff as well as assaults committed by inmates against other inmates, and examined if the inmate's TIS status was at all related to these forms of violence. The prevalence of staff assaults was low for both TIS and non-TIS murderers, with fewer than 9 percent of both groups receiving a ticket for assaulting a staff member and no statistically significant differences between the TIS and non-TIS inmates was evident. Although the prevalence of assaults of other inmates was slightly higher—at roughly 12 percent—there were also no statistically significant differences between the TIS and non-TIS inmates. In the multivariate analyses of any assault (i.e., a dichotomous variable using logistics regression) and of the number of assaults (i.e., a ratio-level variable using ordinary least squares regression), the TIS variable was not statistically related to whether or not the inmate received a ticket for a serious incident or the number of tickets for serious incidents. Similar findings were evident when the specific nature of the assault (staff assaults or assaults on other inmates) was examined between TIS and non-TIS inmates.

Impact of TIS on the Sanctions Imposed on Murderers with Disciplinary Incidents

Analyses were also performed to determine if an inmate's TIS status had any influence on the types of sanctions imposed by IDOC for disciplinary incidents, including placement in segregation, loss of good conduct credit, loss of commissary privileges, and loss of gym/yard privileges. As with the analyses described above, bivariate and multivariate analyses were performed to determine if the inmate's TIS status had an independent relationship to any of these sanctions being imposed.

Among the sample of murderers, the most prevalent form of sanction imposed on those receiving disciplinary tickets was loss of commissary privileges, and no statistical difference was noted between those murderers subject to TIS and those not: roughly 90 percent of both groups lost their commissary privileges for a period of time as a result of a disciplinary incident. For the other forms of punishment, including placement in segregation, loss of gym/yard privileges, and loss of good conduct credit, no statistical differences were identified based on the inmates' TIS status.

Impact of TIS on Disciplinary Incidents for Class X Sex Offenders

To determine if TIS had an impact on the extent and nature of disciplinary incidents among Class X sex offenders in Illinois, data were obtained that allowed for the tracking of disciplinary incidents for a cohort of sex offenders admitted to prison in Illinois between July 1999 and June 2001.

Disciplinary data included that recorded through March 2008, so the average amount of time inmates were at risk of having a disciplinary incident was 8 years. Within the sample of sex offenders tracked were 806 inmates subject to TIS and 599 that were eligible for day-for-day good conduct credit. The specific disciplinary outcomes examined included: total number of disciplinary tickets, any serious incident (yes or no), any assaults (yes or no), assaults of staff (yes or no), and assaults of other inmates (yes or no). Analyses included bivariate comparisons of inmate characteristics, including whether the inmate was subject to TIS or no, and each of these different measures of disciplinary incidents. Below is a description of the findings from each set of these bivariate analyses as well as a summary of the multivariate models tested to examine the effect of TIS on each measure of institutional rule violations.

Impact of TIS on the Total Number of Disciplinary Incidents for Sex Offenders

Bivariate analyses were performed to determine if there was any statistical relationship between inmate characteristics, including whether they were subject to TIS, and the total *number* of disciplinary tickets among the sample of sex offenders (Table 8). No statistically significant relationship was found between the number of tickets for a serious incident and whether or not they were subject to TIS: among both the TIS and non-TIS inmates the average number of disciplinary tickets was roughly 23. As well, no statistical relationship was found between the number of tickets and whether or not they had children, prior prison sentences, or their projected time to serve.

Among the sample of offenders sentenced to IDOC for Class X sex offenses, there was a statistically significant relationship between number of disciplinary tickets and an inmate's age, gender, race, marital status, educational attainment, gang status, and the region of Illinois where they were from. Specifically, younger inmates were more likely to have higher numbers of disciplinary tickets (Spearman's $Rho = -.513$, $p < .001$). Female inmates far outpaced their male counterparts in mean

number of disciplinary tickets, with females having a mean of 49.8, compared to 22.5 for males (F=5.17, p<.05). This statistical relationship held even with the very small number of females (N=5) in this population. African-American inmates had an average of 29.8 tickets, compared to 17.9 per white inmate and 17.5 for Hispanic inmates (F=15.41, p<.001). Inmates who were divorced or single averaged 25.2 tickets, compared to 14.1 for those who were married (F=7.63, p<.01). Similarly, inmates with no high-school diploma/GED averaged 28.8 disciplinary tickets, whereas those with a high-school diploma/GED had 16.8 tickets (F=9.35, p<.005). As well, gang members had an average of 33.6 disciplinary tickets, compared to 20.8 for non-gang members (F=17.56, p<.001). Finally, the region of Illinois where an inmate was from was found to be statistically related to total number of disciplinary tickets. Inmates from Cook County averaged 26 tickets, while those from the collar counties averaged 18.6, those from other metropolitan statistical areas averaged 20.3, those from micropolitan statistical areas averaged 22.8, and those from all other areas averaged 18.4 tickets (F=2.34, p<.10).

Table 8
Average Number of Disciplinary Tickets Received by Those Convicted of Class X Sex Offenses

	Mean Number of Disciplinary Tickets
Total	23.19, (sd) 32.75
Age*** (32.27 years) Spearman=-.513, p<.001	
Gender* F=5.17, p<.05	
Female	49.8, (39.34 sd)
Male	22.51, (26.62 sd)
Race*** F=26.22, p<.001	
White	17.43, (31.27 sd)
Non-White	26.90, (33.17 sd)
Race 2*** F=15.41, p<.001	
White	17.86, (27.75 sd)
African-American	29.84, (28.19 sd)
Hispanic/Other	17.46, (14.94 sd)
Marital Status** F=7.63, p<.01	
Married/Common Law	14.08, (22.89 sd)
Divorced/Single	25.18, (26.49 sd)
Education Level* F=9.35, p<.05	
HS Diploma or GED	16.80, (19.97 sd)

No HS Diploma or GED	28.76, (34.95 sd)
Children F=2.47, p=.117	
None	23.70, (27.86 sd)
1 or More	19.64, (22.97 sd)
Gang Member*** F=17.56, p<.001	
No	20.83, (26.37 sd)
Yes	33.57, (26.87 sd)
Region of Illinois F=2.34, p=.054	
Cook County/Chicago	26.04, (26.15 sd)
Collar County	18.59, (19.12 sd)
Other Metropolitan Statistical Areas	20.31, (24.1 sd)
Micropolitan Statistical Areas	22.80, (42.63 sd)
All Other Areas	18.41, (28.64 sd)
Prior Prison Sentences F=2.29, p=.13	
None	21.84, (27.75 sd)
One or More	25.82, (23.15 sd)
TIS F=.11, p=.745	
Non TIS	22.19, (32 sd)
TIS	22.97, (24.25 sd)
Projected Time to Serve (7.91 years) Spearman=.031, p=.451	

* p<.05, ** p<.01, *** p<.001

Impact of TIS on the Prevalence of “Serious” Incidents among Sex Offenders

Bivariate analyses were performed to determine if there was any statistical relationship, and if so, the strength of that relationship, between inmate characteristics, including whether they were subject to TIS, and whether or not the inmate received a disciplinary ticket for a serious incident among the sample of sex offenders (Table 9). In the bivariate analyses, we found that inmates subject to TIS were more likely to have one or more serious incidents than non-TIS inmates (34.9 percent versus 27.6 percent, respectively; $X^2=3.06$, 1df, $p<.10$), although in the multivariate model that controlled for amount of time served, among other things, the inmates’ TIS status was no longer associated with the prevalence of serious incidents. Thus, the relationship between serious incidents and the inmate’s TIS status in the bivariate relationship is primarily due to the fact that sex offenders subject to TIS in the sample were incarcerated for a longer period of time, and therefore had more of an “opportunity” to engage in a serious incident. The multivariate analyses found that for every additional year a sex offender spent in prison, the likelihood of their getting a ticket for a serious

incident increased 12 percent.

In addition, statistically significant relationships between receipt of a ticket for a serious incident and the inmate's age, race, marital status, whether or not they had children, gang membership, prior prison sentence, projected time to serve, and security level of the facility were also found. Specifically, younger offenders were more likely than older inmates to have received a ticket for a serious incident with the average age of an inmate who received a ticket being 28.96 and the average age of those not receiving tickets being 33.78 ($F=26.66$, $p<.001$). Similarly, non-white inmates were more likely than white inmates to have had a serious incident (37.8 percent versus 26.3 percent, respectively) ($X^2 =7.85$, 1 df, $p=.005$), although the strength of the relationship was relatively weak ($\Phi=.115$, $p=.005$). An inmate's marital status also had a statistically significant relationship with the occurrence of a serious offense as divorced/single inmates were more likely to have received a ticket than married inmates (34.3 percent versus 19.2 percent, respectively) ($X^2 =4.38$, 1df, $p<.05$), however this relationship was weak ($\Phi=.132$, $p<.05$). Inmates who had no children were more likely to have a serious incident compared to those with at least one child (34.7 percent versus 26.2 percent, respectively; $X^2 =3.52$, 1df, $p<.10$). However, this was a relatively weak relationship ($\Phi=.007$, $p<.10$). In addition, inmates identified as gang members were more likely than non-gang members to have received a ticket for a serious incident (47.2 percent versus 30.1 percent, respectively), and the strength of the relationship was weak ($\Phi=.129$, $p<.005$). Prior prison sentence also had a significant relationship with the likelihood of an inmate receiving a ticket as those with prior sentences were more likely than those without to have received a ticket for a serious incident (41.8 percent versus 30.1 percent, respectively) ($X^2 =6.46$, 1df, $p<.05$), while this relationship was weak ($\Phi=.104$, $p<.05$). An inmate's projected time to serve was also statistically significant, with those having one or more serious incidents having longer mean sentences than those with no serious incidents (9.4 years versus 7.7 years, respectively; $F=12.14$, $p<.005$). Finally, inmates housed in the highest security level facility were more likely to have received a ticket for a serious incident than those housed in lower security facilities (54.2 percent versus 15.9 percent, respectively) ($X^2 =40.63$, 4df, $p<.001$) and this relationship was relatively weak (Cramer's $V=.262$, $p<.001$). On the other hand, no statistical relationship was found between receipt of a ticket for a serious incident and inmate gender, education level, or the region of Illinois where they were from.

Table 9

Comparison of Demographic, Socio-Economic and Criminal History Characteristics among Class X Sex Offenders with No Serious Offenses and at Least One Serious Offense

	No Serious Offenses	One or More Serious Offenses	Total
Total	66.8%	33.2%	100%
Age*** (Mean, Years) F=26.66, p<.001	33.78	28.96	32.27
Gender	$X^2 = 1.71, 1df, p = .192$		
Female	40.0%	60.0%	100%
Male	67.5%	32.5%	100%
Race**	$X^2 = 7.85, 1df, p < .01, \Phi = .115, p = .005$		
White	73.7%	26.3%	100%
Non-White	62.8%	37.8%	100%
Race 2*	$X^2 = 9.05, 2df, p < .05, \text{Cramer's } V = .123, p < .05$		
White	73.7%	26.3%	100%
African-American	61.0%	39.0%	100%
Hispanic/Other	67.0%	33.0%	100%
Marital Status*	$X^2 = 4.38, 1df, p < .05, \Phi = .132, p < .05$		
Married/Common Law	80.8%	19.2%	100%
Divorced/Single	65.7%	34.3%	100%
Education Level	$X^2 = .015, 1df, p = .901$		
HS Diploma or GED	68.4%	31.6%	100%
No HS Diploma or GED	67.6%	32.4%	100%
Children	$X^2 = 3.52, 1df, p = .061$		
None	65.3%	34.7%	100%
1 or More	73.8%	26.2%	100%
Gang Member**	$X^2 = 9.96, 1df, p < .01, \Phi = .129, p < .01$		
No	69.8%	30.2%	100%
Yes	52.8%	47.2%	100%
Region of Illinois	$X^2 = 5.9, 4df, p = .207$		
Cook County/Chicago	63.3%	36.7%	100%
Collar County	65.4%	34.6%	100%
Other Metropolitan Statistical Area	72.7%	27.3%	100%
Micropolitan Statistical Area	76.9%	23.1%	100%
All Other Areas	71.3%	28.8%	100%

Prior Prison Sentence*	$X^2 = 6.46, 1df, p < .05, \Phi = .104, p < .05$		
None	69.9%	30.1%	100%
One or More	58.2%	41.8%	100%
Projected time to Serve (Mean, Years)** $F = 12.14, p < .01$	7.676	9.427	100%
Truth-in-Sentencing	$X^2 = 3.06, 1df, p = .08$		
No	72.4%	27.6%	100%
Yes	65.1%	34.9%	100%
Security Level*** $X^2 = 40.63, 4df, p < .001, \text{Cramer's } V = .262, p < .001$			
Maximum	45.8%	54.2%	100%
Secure Medium	53.0%	47.0%	100%
High Medium	69.8%	30.2%	100%
Medium	75.7%	24.3%	100%
High Minimum	84.1%	15.9%	100%

* $p < .05$, ** $p < .01$, *** $p < .001$

Multivariate analyses were conducted in order to more accurately determine which variables have the greatest impact on the prevalence of serious incidents, while statistically controlling for certain factors. The first model included independent variables for age at admission, projected time to serve in years, actual years served, gender, race in three categories (white, African-American and Hispanic/other), marital status, whether or not the offender had children, educational attainment, gang status, area where they were sentenced, whether or not they were previously admitted to prison, the security level of their institution, and whether or not they were subject to TIS. The dependent variable in the first model was whether or not an offender committed a serious offense, as defined above. This first model was found to be statistically significant at the $p < .001$ level, with an R^2 of .159 and a pseudo- R^2 of .221. The independent variables improved the predictive ability of this model from 67.3 percent to 70.5 percent.

Of the 13 independent variables, seven were found to be statistically significant when other factors were controlled. Age at admission ($p < .001$) was statistically significant, and it was found that for every year older an offender is, his or her likelihood of receiving a disciplinary ticket for a serious offense decreases by about 5 percent (odds ratio of .955). The amount of time that an offender has served was also significant ($p < .05$). It was found that for every year longer that an inmate served, his or her chances of receiving a disciplinary ticket for a serious offense increased by about 12

percent (odds ratio of 1.121). Further, whether or not an offender had children ($p < .10$) acted as a protective factor against receiving a ticket for a serious offense. Offenders who had at least one child were over 40 percent less likely to receive a ticket for a serious offense (odds ratio of .593). In some cases, where an offender was sentenced also had an impact on his or her likelihood of being ticketed for a serious offense. It was found that offenders sentenced in metropolitan statistical areas other than Cook County were about 45 percent less likely to receive a ticket for a serious offense than those coming from Cook County (odds ratio of .548). As well, the security level of the institution where these Class X sex offenders were housed was also found to be statistically significant. Inmates housed in high medium facilities ($p < .005$) were 60 percent less likely to have a ticket for a serious offense than their counterparts in maximum security facilities (odds ratio of .397). Those housed in medium security facilities ($p < .001$) were about 74 percent less likely to have a serious offense ticket than those in maximum security (odds ratio of .259). Finally, the most influential variable in this model ($p < .001$; Wald=21.4) was found to be placement in a high minimum security facility. Compared to maximum security inmates, those placed in high minimum were 85 percent less likely to be ticketed for a serious offense.

Impact of TIS on the Prevalence of Assaults by Sex Offenders

Bivariate and multivariate analyses were also performed to determine if there was any statistical relationship, and if so, the strength of that relationship, between inmate characteristics, including whether they were subject to TIS, and whether or not the inmate received a disciplinary ticket for any assault (Table 10). No statistically significant differences were noted between sex offenders subject to TIS and those that were not, with roughly 8 to 10 percent of both groups receiving a disciplinary ticket for an assault. This lack of a statistical relationship between TIS status and assaults was also evident in the multivariate analyses, as well as when assaults specifically against staff were examined (roughly 4 to 6 percent of both groups received tickets for this) and assaults against other inmates (with roughly 6 percent of both groups receiving tickets for this).

Table 10

Comparison of Demographic, Socio-Economic and Criminal History Characteristics among Class X Sex Offenders with No Assaults and at Least One Assault

	No Assaults	One or More Assaults	Total
Total	89.8%	10.2%	100%
Age*** (Mean, Years) F=11.44, p<.001	32.95	27.87	32.27
Gender*	X ² =5.45, 1df, p<.05, Phi=-.093 p<.05		
Female	60.0%	40.0%	100%
Male	90.7%	9.3%	100%
Race*	X ² =6.52, 1df, p<.05, Phi=.102, p<.05		
White	94.0%	6.0%	100%
Non-White	87.9%	12.1%	100%
Race 2***	X ² =16.11, 2df, p<.001, Cramer's V=.16, p<.001		
White	94.0%	6.0%	100%
African-American	84.9%	15.1%	100%
Hispanic/Other	95.3%	4.7%	100%
Marital Status***	X ² =8.52, 1df, p<.001, Phi=.18, p<.001		
Married/Common Law	100.0%	0.0%	100%
Divorced/Single	86.4%	13.6%	100%
Education Level	X ² =1.22, 1df, p=.27		
HS Diploma or GED	91.4%	8.6%	100%
No HS Diploma or GED	87.0%	13.0%	100%
Children	X ² =.162, 1df, p=.687		
None	90.2%	9.8%	100%
1 or More	91.3%	8.7%	100%
Gang Member***	X ² =13.53, 1df, p<.001, Phi=.146, p<.001		
No	92.3%	7.7%	100%
Yes	80.4%	19.6%	100%
Region of Illinois	X ² =6.92, 4df, p=.14		
Cook County/Chicago	89.3%	10.7%	100%
Collar County	87.4%	12.6%	100%
Other Metropolitan Statistical Area	90.4%	9.6%	100%
Micropolitan Statistical Area	90.2%	9.8%	100%
All Other Areas	97.8%	2.2%	100%
Prior Prison Sentence***	X ² =11.981, 1df, p<.001, Phi=.138, p<.001		

None	92.7%	7.3%	100%
One or More	83.2%	16.8%	100%
Projected time to Serve (Mean Years) F=2.36, p=.125	8.036	9.26	100%
Truth-in-Sentencing	X ² =.972, 1df, p=.324		
No	92.2%	7.8%	100%
Yes	89.7%	10.3%	100%
Security Level*** X ² =19.36, 4df, p<.001, Cramer's V=.18, p<.001			
Maximum	79.6%	20.4%	100%
Secure Medium	85.1%	14.9%	100%
High Medium	92.3%	7.7%	100%
Medium	92.4%	7.6%	100%
High Minimum	96.3%	3.7%	100%

* p<.05, ** p<.01, *** p<.001

Impact of TIS on the Sanctions Imposed on Sex Offenders with Disciplinary Incidents

As with the examination of the disciplinary incidents of the murderers, analyses were also performed with the sex offender sample to determine if an inmate's TIS status had any influence on the types of sanctions imposed by IDOC for disciplinary incidents, including placement in segregation, loss of good conduct credit, loss of commissary privileges, and loss of gym/yard privileges. As with the analyses described above, bivariate and multivariate analyses were performed to determine if the inmate's TIS status had an independent relationship to any of these sanctions being imposed.

Among the sample of sex offenders, the most prevalent form of sanction imposed on those receiving disciplinary tickets was loss of commissary privileges, and no statistical difference was noted between those sex offenders subject to TIS and those not: roughly 80 percent of both groups lost their commissary privileges for a period of time as a result of a disciplinary incident. For the punishments of placement in segregation and loss of gym/yard privileges, again, differences between the TIS and non-TIS inmate were not evident. Finally, and interestingly, when comparisons of whether or not the inmate lost good conduct credit and their TIS status were made, we found that those inmates subject to TIS were more likely than those not subject to TIS to lose good conduct credit. This pattern was also evident in the multivariate analyses performed. This is interesting to

note because there were not any substantive differences noted in the prevalence or pattern of disciplinary incidents among the TIS and non-TIS sex offenders, and sex offenders subject to TIS are only eligible to earn up to a 15 percent reduction in their sentence (i.e., 85 percent must be served under TIS) as opposed to the non-TIS sex offenders, who can earn up to 50 percent off of their sentence through good conduct credits.

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APPENDIX 1

Ordinary Least Squares Results for Analyses of Murder Sentence Lengths (in Years)

OLS Results for Maximum Sentence Length for Murder

	Unstandardized Coefficients		Standardized Coefficients		
	B	S. E.	Beta	t	Sig.
Constant***	37.590	1.396		26.920	0.000
Admission Age in Years	0.048	0.026	0.023	1.845	0.065
Gender (Female=0, Male=1) ***	6.081	0.868	0.079	7.003	0.000
Race (White=0, Non-White=1) ***	-2.370	0.620	-0.047	-3.826	0.000
Marital Status (Single=0, Married=1) **	2.769	1.034	0.047	2.677	0.007
Education Level (No High-School/GED=0, High-School or GED=1)	0.547	0.700	0.015	0.781	0.435
Children (None=0, 1 or more=1) **	1.302	0.497	0.035	2.620	0.009
Gang Status (None=0, 1=Yes)	-0.118	0.472	-0.003	-0.251	0.802
Region of Illinois (Rest of Illinois=0, Cook County=1)***	-3.334	0.521	-0.077	-6.403	0.000
Prior Prison Sentences (None=0, 1 or more=1) ***	4.938	0.520	0.117	9.505	0.000
Year Trend 1989...1996 and 1997-2008***	1.101	0.137	0.161	8.031	0.000
Not TIS Relative to Pre-TIS	-1.648	0.857	-0.036	-1.923	0.055
TIS Relative to Pre-TIS***	-3.941	0.798	-0.101	-4.938	0.000

* p<.05, ** p<.01, *** p<.001

Logistic Regression Results for Murder Sentences

Logistic Regression Results with Dependent Variable as Maximum Sentence at or under Statutory Maximum (Coded as 0) or over Statutory Maximum, Including Life and Death (Coded as 1)

	B	S.E.	Wald	df	Sig.	Exp(B)
Age at Admission***	0.021	0.003	39.563	1	0.000	1.021
Gender						
Female (reference)						
Male***	0.468	0.139	11.292	1	0.001	1.597
Race						
White (reference)***			29.834	2	0.000	
African-American***	-0.350	0.080	19.130	1	0.000	0.705
Hispanic/Other***	-0.589	0.114	26.732	1	0.000	0.555
Marital Status						
Single/Divorced (reference)			0.382	2	0.826	
Married/Common Law	0.055	0.090	0.369	1	0.544	1.056
Education Level						
No HS/GED (reference)			3.550	2	0.170	
HS/GED	0.127	0.070	3.294	1	0.070	1.135
Children						
No Children (reference)						
One or More Children	-0.029	0.070	0.168	1	0.682	0.972
Gang Status						
No Affiliation (reference)						
Affiliated	-0.121	0.067	3.195	1	0.074	0.886
Region of Illinois						
Cook County (reference)***			67.783	3	0.000	
Collar County***	0.705	0.102	47.542	1	0.000	2.023
Other Metro Area***	0.459	0.084	29.787	1	0.000	1.582
Rural Area***	0.472	0.120	15.590	1	0.000	1.603
Prior Prison Sentences						
No Prior Sentences (reference)						
One or More Sentences***	0.688	0.068	102.105	1	0.000	1.990
Truth-in-Sentencing						
Pre-TIS (reference)***			143.742	2	0.000	
Non-TIS	-0.023	0.081	0.081	1	0.776	0.977
TIS***	-0.835	0.074	125.886	1	0.000	0.434
Constant***	-2.540	0.172	217.086	1	0.000	0.079

* p<.05, ** p<.01, *** p<.001

APPENDIX 2

*Ordinary Least Squares Results for Analyses of Class X Sex Offender Sentence Lengths
(in Years)*

OLS Results for Maximum Sentence Length for Class X Sex Offenders

	Unstandardized Coefficients		Standardized Coefficients		
	B	S.E.	Beta	t	Sig.
Constant***	9.693	1.335		7.261	0.000
Admission Age in Years ***	0.069	0.011	0.081	6.460	0.000
Gender (Female=0, Male=1)	-0.187	1.289	-0.002	-0.145	0.884
Race (White=0, Non-White=1)	0.157	0.278	0.008	0.563	0.574
Marital Status (Single=0, Married=1)	-0.078	0.520	-0.003	-0.149	0.881
Education Level (No High-School/GED=0, High-School or GED=1)	0.125	0.407	0.006	0.308	0.758
Children (None=0, 1 or more=1) **	0.451	0.280	0.024	1.611	0.107
Gang Status (None=0, 1=Yes)***	1.041	0.323	0.042	3.229	0.001
Region of Illinois (Rest of Illinois=0, Cook County=1)	-0.508	0.269	-0.026	-1.888	0.059
Prior Prison Sentences (None=0, 1 or more=1) ***	4.954	0.282	0.223	17.578	0.000
Not TIS Relative to Pre-TIS	0.274	0.385	0.009	0.711	0.477
TIS Relative to Pre-TIS*	-0.505	0.251	-0.026	-2.011	0.044

* p<.05, ** p<.01, *** p<.001

APPENDIX 3

Ordinary Least Squares Results for Analyses of Murder Disciplinary Tickets

OLS Results for Total Disciplinary Tickets Received by Murder Offenders

	Unstandardized Coefficients		Standardized Coefficients		
	B	S.E.	Beta	t	Sig.
Constant***	56.870	6.493		8.759	0.000
Admission Age in Years ***	-0.559	0.095	-0.217	-5.909	0.000
Projected Time to Serve in Years ***	-0.094	0.027	-0.125	-3.470	0.001
Years Served *	1.297	0.590	0.071	2.197	0.028
Gender (Female=0, Male=1) ***	-27.562	3.034	-0.322	-9.084	0.000
Race (White=0, Non-White=1)	2.057	2.108	0.034	0.976	0.329
Marital Status (Single=0, Married=1)	0.534	4.050	0.004	0.132	0.895
Children (None=0, 1 or more=1)	-2.803	2.055	-0.055	-1.364	0.173
Education Level (No High-School/GED=0, High-School or GED=1)	-1.643	2.277	-0.027	-0.722	0.471
Gang Status (None=0, 1=Yes)	2.453	1.669	0.055	1.470	0.142
Region of Illinois (Rest of Illinois=0, Cook County=1)	0.818	1.844	0.016	0.443	0.658
Prior Prison Sentences (None=0, 1 or more=1)	2.567	2.126	0.052	1.208	0.228
Maximum Security (No=0, Yes=1)	-3.144	1.796	-0.065	-1.751	0.080
Truth-in-Sentencing (No=0, Yes=1) **	-4.666	1.599	-0.103	-2.919	0.004

$R^2=.188$, Adjusted $R^2=.175$; Model $F=14.125$, $p<.001$
 $p<.05$, ** $p<.01$, *** $p<.001$