

Three Strikes:
Has the popular sentencing policy increased the
rate of homicides?

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**THREE STRIKES:
HAS THE POPULAR SENTENCING POLICY INCREASED THE RATE OF HOMICIDES?**

ABSTRACT

Utilizing regression analysis in Cross-sectional longitudinal design this research discovered an increase in the homicide rate is associated with states that implemented three-strike law. These results follow the discoveries of Marvell and Moody (2001) and Kovandzic et al. (2002) that found implementation of three-strikes law caused short and long term increases in the homicide rate.

INTRODUCTION

During the 1990s, a number of states implemented laws to curb the violent activities of habitual felons. The rationale for the law is that longer prison terms reduce crime by deterring and incapacitating the most active and dangerous criminals (Marvell and Moody, 2001). Although many states had preexisting habitual felony offender laws, many states passed stricter new laws due to public fear violent crime was out of control (Austin et al, 1999). The new crime control policies became known as the “three strikes and you’re out” laws. Each state that passed a three-strike law will assess stricter sentencing conditions on second and third strike.

Prior studies have exam the laws impact on crime in general; however, few studies have delved into three strikes impact on the act of homicide. Homicide was chosen for this research since it is the most serious felony and it is a crime the three strikes law was designed to combat. My research will uncover if three-strikes laws enacted across the nation have increased the rate of homicides. The annual homicide rate of states enacting three-strikes laws will be compared with state that have not legislated three-strike laws. This research will provide an overview of what has been researched in prior three-strikes studies, outline the hypothesis and model, and discuss the results. The conclusion will summarize the highlights of the research and address the limitations and strengths of the research design.

LITERATURE REVIEW

The policy of “three-strikes and you’re out” as a tool of controlling habitual violent offenders is considerably popular in the United States; however, the number of studies analyzing the effects of the policy nationwide, or within individual states relatively sparse. The emergence in the early 1990s of three-strikes can be observed in the effort raised by a conservative Seattle talk-show host John Carlson. As early as 1988, he dreamed up a remedy to control violent repeat offenders: life in prison after the third felony conviction (Gest, 1994). His ideal had a slow beginning; however following the sensationalized 1993 murder of Diane Ballasiotes by a convicted rapist in Washington, politicians from the left and right began to take his opinion seriously (Gest, 1999). During the same year the push for “three strikes and you’re out” legislation made it to California following another sensationalized murder of Polly Klaas by a convicted felon with an extensive prior record of violence (Gest, 1994). A wave of being

tough on crime rushed across the nation. The ideal of three-strikes even made it into the 1994 State of the Union Address (Gest, 1994). By 1997 24 states and the federal government enacted laws using “three strikes and you’re out” philosophy to control crime (Austin et al., 1999).

In *What Not to do About Crime*, Skolnick (1995) claimed criminologists must bring evidence and reasoned debate over crime control. Skolnick states crime policy in the United States was not based on research and analysis, but on intuition of what works best in dealing with criminals. Unfortunately, policy makers have not learned from the numerous studies and have set crime policy based upon anxieties of the moment, policies of resentment and the shadow of race (Skolnick, 1995). He asserts the criminologist community needs to continue to develop a broader understanding of social, economic, and historical causes of crime (Skolnick, 1995). He stated much the research on what causes crime points to causation from the underlying social needs and problems (Skolnick, 1995). People and politicians assume that long periods of incapacitation offer safety; however, Skolnick argues criminologists have often shown this is not the case.

One of the earliest qualitative comparisons of three strikes laws in the nation was analyzed in *The Impact of Three Strikes and You’re Out*, Austin et al. (1999). Comparison was made between the three strikes state preexisting habitual offender laws and new three strikes law. The comparison determined preexisting habitual offender laws already contained the necessary qualities to deter and incapacitate violent felons, thus making the three strikes legislation redundant and largely symbolic (Austin et al, 1999). Unlike the analysis of some of the early studies, this research knew a quantitative study utilizing a time-series analysis would not be useful since the post-intervention period was too short to provide any meaningful analysis (Austin et. al, 1999). The research concluded the national movement toward three strikes and you’re legislation has been a symbolic campaign that has little effect on the criminal justice system or public safety (Austin et al, 1999).

Austin et al. (1999) provided analysis of which states implemented new sentencing guidelines. The table below illustrates states that legislated three-strike laws.

Table 1 – Year of state implementation of three-strikes law			
State	Year of Implementation		
	1993	1994	1995
Arkansas			X
California		X	
Colorado		X	
Connecticut		X	
Florida			X
Georgia			X
Indiana		X	
Kansas		X	
Louisiana		X	
Maryland		X	
Montana			X
Nevada			X
New Jersey			X
New Mexico		X	
North Carolina		X	
North Dakota			X
Pennsylvania			X
South Carolina			X
Tennessee			X
Utah			X
Vermont			X
Virginia		X	
Washington	X		
Wisconsin		X	

The table above illustrates the three-strike method of deterrence gained popularity over the course of three years. The State of Washington, implemented its law in 1993. In 1994, eleven states added the law to their sentencing guidelines. By 1995, an additional 12 states implemented the new sentencing provision.

In the Austin et al. (1999) comparison of states that implemented three-strikes, the research discovered all states enacted serve penalties for repeat felons convicted of their third felony. Most states tended to restrict the use of three-strikes for violent felonies (homicide, rape, aggravated assault, etc.); however, some states also include non-violent charges such as drug sales in Indiana and California, burglary and weapons possession in California and embezzlement and bribery in South Carolina (Austin et al, 1999). Although the laws differ with length of imprisonment and the type of felony that is considered a strikeable offense, each state considers the act of homicide a strikeable offense.

Three Strikes Impact on Crime in California

Many of the empirical studies on three-strikes have analyzed its effect on the State of California: Stolzenberg and D'Alessio (1997); Shepherd (2002); Ramirez and Crano, (2003); Worrall (2004); and Helland and Tabarrok (2007). The reasoning behind this focused research is because California implemented the harshest three strikes legislation in the nation allowing almost any felony to be counted as a strike as noted by Austin et al. (1999), Worrall, (2004), Stolzenberg and D'Alessio (1997), and Marvell and Moody (2001).

The first quantitative study on the effect of the three-strikes law appeared in 1997. In *Three Strikes and You're Out*, Stolzenberg and D'Alessio (1997) claimed the three-strikes law failed to decrease serious crime or petty theft rates below the level expected on the basis of pre-existing trends. The analysis addresses this claim by using monthly crime data between 1985 and 1997 from California's ten largest cities with an interrupted time-series design with nonequivalent dependent variables. The authors note it is premature to accept this conclusion as definitive and cannot argue the law deterred people. The downfall of the article, as Stolzenberg and D'Alessio state in their conclusion, is that few observations were available to authors to analyze the post intervention effects of the three-strike law.

In *Fear of the First Strike: The Full Deterrent Effect of California's Two- and Three-Strikes Legislation* Shepherd (2002) claimed the three-strikes law will deter all potential offenders regardless of the number of strikes they possess (Shepherd, 2002). Utilizing the general economic model of crime which depicts a choice between legitimate and illegitimate activities Shepherd devised a model that depicts how offenders base their decisions on factors in the post-intervention years. An individual will choose to allocate his time between the two activities based on the expected utility associated with each. Shepherd used a panel data set of the 58 California counties for period of 1983- 1996. The risk of receiving a strike sentence is estimated as the number of offenders receiving a two or three-strike sentence divided by the numbers of prisoners imprisoned. The analysis Shepherd provides delves deeper into the quality of the law where she not only evaluates the impact on crime, but evaluates the deterrent capacity of the probability of receiving a three strikes sentence. One problem in her analysis is her post-intervention period is relatively short noting California enacted its three strikes law in 1994.

Ramirez and Crano (2003) in *Deterrence and Incapacitation: An Interrupted Time-Series Analysis of California's Three-Strikes Law* determined the three strikes law in California is responsible for a significant drop in crime (Ramirez et al, 2003). Three analyses were used to determine the impact of the three-strikes law: replication and extension of the Stolzenberg and D'Alessio (1997) study extending analysis through 1998; (2) analysis of the possibility of gradual and abrupt impact of the law; and (3) analysis of three-strikes on various crime measures. Their analyses illustrated that serious and minor crimes revealed significant declines following the implementation of the law. Second, the three-strikes legislation was responsible for significant reductions in both minor and serious crime.

In *The effect of three-strikes legislation on serious crime in California* Worrall (2004) claimed the California's three-strike legislation has not resulted in any deterrent and

incapacitative effects. The study uses a time-series cross sectional design between 1989 and 2000. Worrall's (2004) model used three equations that each estimated seven times with each of the seven index crimes: first equation did not contain an incapacitation variable as to discern the deterrence effect from the incapacitation effect; the second equation contains a three-strike sentence variable and the incapacitation variable; and the third equation adds the unit-specific time trends. Using deterrence variables the study models the conditional probability of receiving a three-strike sentence and the percentage of people held in custody.

In *Does Three Strikes Deter* Helland and Tabarrok (2007) claim the California three-strike law serves as an effective deterrent in decreasing criminal activity reducing felony arrest rates among the class of criminals with two strikes by 17-20%. Helland and Tabarrok used a nonparametric estimation used to exam the impact of three strikes laws departing from the conventional methods of analysis. The study follows a large subset of criminals released from prison. Utilizing what the authors call fortuitous randomization of trial, the study identifies the causal effect of the three-strikes on criminal activity. Their assumption is that these individuals are comparable because of the outcome of the trial is to a considerable degree stochastic (Helland and Tabarrok, 2007). Data for the research was taken from the United States Department of Justice Statistics' of prisoners released in 1994. The data is a random sample of 38,624 individuals released from prison in 1994 (7,183 released in California). Although the study attempts to use a random sample to strengthen their analysis I find their research design to be unpersuasive since the research method did not engage in any pre- and post-law comparisons.

Three Strikes Effect on Crime in the United States

Only two quantitative studies have specifically tackled analyzing the impact of three-strikes laws in the United States. The significant finding of each study was the implementation of three strikes law across the nation has done little to deter crime and has resulted in the unintended consequence of pushing a small, but significant group of habitual offenders to commit the act of homicide.

In *The Lethal Effect of Three-Strike Laws* Marvell and Moody (2001) claim the law resulted in a lethal effect, prompting more homicides, by illustrating a 10-12 percent increase in homicides nationwide in the short run, and a 23-29 percent increase in the long run. They argue that a criminal fearing the enhanced penalties of three strike laws will murder a victim or witnesses to reduce the chance of apprehension and conviction. Marvell and Moody suggest that criminals may change their modus operandi when the penalties for a crime and the exacerbated version of that crime are similar. Essentially, criminals in a position as described by Marvell and Moody may feel they have nothing to lose and will take whatever means necessary to get way with the crime. Although Marvell and Moody (2001) assert these occurrences are rare, they state the impacts can be large. The research used a fixed-effects model with state data over 50 states across 29 years. In addition to analyzing the effects on homicide, Marvell and Moody compared their results by analyzing three-strikes effect on other violent felonies to make their findings more persuasive.

The claim three-strike laws result in lethal homicide promoting effects were studied one year later using cities as the unit of analysis in the Kovandzic et al. (2002) article *Unintended*

Consequences of Politically Popular Sentencing Policy: The Homicide Promoting Effects 'Three Strikes' In U.S. Cities - 1980-1999. The study claimed implementation of three-strike law may result in significant unintended consequences for jurisdictions adopting the law (Kovandzic et al, 2002). The study utilized a multiple time-series research design that pools data from 1980 to 1999 for 188 large U.S. cities with a population of 100,000 or more. The conclusion of the research indicated that cities in states with three-strikes laws experienced short-term increases in homicide rates of 13-14 percent and long-term increases of 16-24 percent compared with cities in states without the laws. This study finding was virtually identical to the results of Marvell and Moody (2001). The results of both the Marvell and Moody (2001) study and the Kovandzic et al (2002) address serious implications of the impact of three strike laws.

The literature on three-strikes does not assert any clear opinion if three-strike laws have area proven deterrent of crime. Unfortunately, most of the research evaluated impact of three strikes on California and of these studies no consensus can be made if the law resulted in significant decrease in crime.

CONCEPTUAL FRAMEWORK

The hypothesis follows the claims of the nationwide studies by Marvell and Moody (2001) and Kovandzic et al. (2002) that the homicide rate will increase in states that adopt three-strike laws. As stated above in the literature review the change in modus operandi of the criminal will create lethal effects (Marvell and Moody, 2001). Thus, states that have enacted three strikes law will witness an increase in homicides.

The dependent variable in the model will be annual state homicide rate per 100,000 individuals as compiled by the Federal Bureau of Investigation uniform crime reporting program (UCR). The independent variable of interest in the study will be states that have legislated three-strike laws to deter crime. A number of independent variables that deal with crime were identified utilizing the research of Marvell and Moody (2001) and Kovandzic et al. (2002). Independent variables that are typically used in state-level studies of crime such as: percentage of population ages with the highest arrest rates (15-19, 20-24, and 25-29); economic variables of unemployment rate and poverty rate; and demographic characteristics using percent African-American and percent prison population (Marvell et al, 2001). The model will add use of the death penalty as an additional variable to expand the study. Neither Marvell and Moody (2001), nor Kovandzic et al. (2002) utilized state use of the death penalty in their research.

Research Design and Data Collection

The research will be a quasi-experimental design utilizing a cross-sectional longitudinal model. Unit of analysis for the research will be the state. All 50 states will be analyzed in the model during over a period of 25 years between 1982 and 2006.

This research design will incorporate three separate analyses. First, an independent samples *t*-test will determine the post-intervention affect of three-strikes comparing the homicide mean rate of states who implemented the law and the states that did not. Second, paired sampled *t*-tests will used to analyze the mean homicide rates for states implementing three-strikes and states that did not. Third, regression will be used to determine the impact of

implementation three-strikes across the nation while controlling for confounding variable and a three-strike dummy variable.

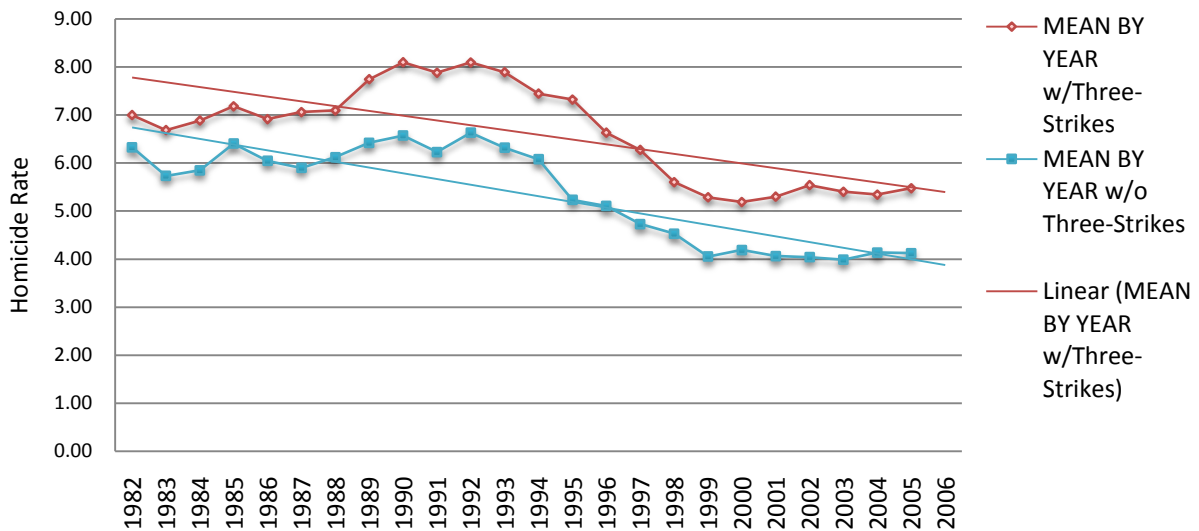
Secondary data will be utilized for all variables of the research. Table 2 lists the source of the secondary data and type of data collected from each source (see appendix for further explanation of data collection and use).

SECONDARY DATA SOURCE	DATA
Department of Justice, Bureau of Justice Statistics	<ul style="list-style-type: none"> • Federal Bureau of Investigation Uniform Crime Reports • Prison Population Estimates
Census Bureau	<ul style="list-style-type: none"> • Population Estimates • Percentage of population African-American • Percentage of population age 15-19, 20-24, and 25-29 • Poverty Rates
Department of Labor, Bureau of Labor Statistics	<ul style="list-style-type: none"> • Unemployment Rates
Death Penalty Information Center	<ul style="list-style-type: none"> • Statistics on states' use of death penalty
Austin et al. (1999)	<ul style="list-style-type: none"> • Data on states' use of three-strike laws

RESULTS

To begin the discussion I will provide a rough illustration of the homicide trends from 1982 through 2006. The graph in figure 1 illustrates the mean annual homicide rate for state with three-strikes and states without.

Figure 1 – Mean of Homicides for With and Without Three-Strikes



The graph quickly and obviously illustrates states implementing three-strike laws possess a higher mean rate of homicides and states that possess a lower mean rate did not implement three-strikes. The mean rate of homicides for both groups move in a similar fashion during the research period. Initially a drop is observed in 1983 followed by an increase into 1985. A slight decrease occurs in both groups in 1986, but between 1987 through 1991 the homicide rate increases, more so for the states that implemented three-strikes during the mid 1990s. After reaching the highest mean for the homicide rate for the research period in 1993, homicide rates for both groups decreased.

Trend lines were generated to provide a more refined description of the comparison of mean between the groups. For each group we observe the mean rate decreasing between 1982 and 2006; however, the trends are slightly different. The mean rate of homicides for the states that implemented three-strike laws exhibit a shallower decrease compared to the mean homicide rate for states that have not implemented three-strikes.

Three-Strikes Intervention on Mean Homicide Rate

An independent samples *t*-test was used to compare the mean homicide rate of states implementing three-strike laws against states that did not during the post-intervention years of 1993 through 2006. Homicide mean rates for the non-three-strike states were calculated from 1993 through 2006. Homicide mean rates for the three-strike states were calculated with the states year of implementation through 2006. Depending on year of implementation this may entail a post intervention period ranging from 1993 to 2006, 1994 to 2006, or 1995 to 2006 (see Table 1 for reference). As a reminder the alternative hypothesis is the homicide rate will increase in states with three-strike laws. The results of the independent samples *t*-test yielded insignificant results discovering the mean rate for homicides in the post-intervention period for three-strike states did not increase.

Table 3 – Results of Post-Intervention Independent <i>t</i>-Test				
Three-Strikes?	Mean	<i>SD</i>	<i>t</i>	<i>p</i> value
Yes	6.0	6.87	-1.75	.087
No	4.65	2.53		

One-tail upper.

Comparison of Pre and Post Three-Strikes Intervention

Means were calculated by state for the pre and post intervention periods. These means were then analyzed utilizing separate paired samples *t*-test: the first to analyze the pre and post intervention comparison for three-strike states; and the second to analyze the pre and post intervention of states that did not implement the law. The pre-intervention periods of the non three-strikes states is 1982 through 1992 for the pre-intervention period and 1993 through 2006 for the post intervention period. The periods for the states that implemented three-strikes law is the same as what is noted in independent samples *t*-test (see Table 4).

Three-Strikes?	df	Pre-intervention	Post-Intervention	Change in Mean Homicide Rate	t
Yes	23	M = 7.35	M = 6.0	M = 1.35, SD = 1.27	5.199*
No	25	M = 6.28	M = 4.28	M = 1.63, SD = 1.61	5.137*

* $p < .10$, $p < .05$, and $p < .01$, two-tailed.

States that did implement three-strike laws showed a significant decrease from the pre-intervention to the post-intervention illustrating an overall mean decrease. Results indicate a significant decrease in the homicide rate for states that did not implement three-strike laws results indicated there was a decrease in from pre-intervention period to post-intervention. Both paired samples *t*-test show the mean rates of homicides changes for both states that implemented the law and states that did not. The results also indicate state that did not implement the three-strike law saw a greater mean decrease than states who did implement the law.

The results of the paired and independent samples *t*-test provide an inferential explanation to the simple descriptive graph introduced at the beginning of this section. . Although this result may seem as if it disproves the hypothesis, we must place these results aside until the results of the regression analysis since other control variable may been at work. The independent sample *t*-test tests the uncontrolled difference in means between two groups. The multiple regression analysis will insert the confounding variables into the test to analyze the effects of three-strikes more accurately.

Homicide Rate Regression

The regression model analyzing three-strikes effect on homicide rate is significant and exhibits some interesting results. Results of the scatterplot matrix and correlation were inconclusive for multicollinearity. The R^2 of .643 indicates the variables included in the model explain about 63 percent of the variation in homicide rates. The adjusted R^2 drops to .640; however, this drop is not steep, and illustrates a good model. The *F* statistic of 248.2 allows me accept the alternative hypothesis indicating there is a relationship among the variables.

Table 5 – Homicide Rate Regression

Variable	Standardized Coefficients	
	<i>B</i>	<i>SE B</i>
% Prison Population	4.00***	.471
Poverty Rate	.217***	.019
Unemployment Rate	.323***	.038
% African American	.153***	.008
% Ages 15 to 19	.291**	.116
% Ages 20 to 24	-.927***	.114
% Ages 25 to 29	1.276***	.084
Death Penalty State	.425***	.147
Three-Strikes State	.352**	.153

* $p < .10$. ** $p < .05$. *** $p < .01$

Percentage of prison population can be associated with an increase in the homicide rate for a number of reasons. First, states having a large prison population may have larger rates of violent crime rates and thus have more instances where these criminals are committing acts of homicides. Second, the criminals who are incarcerated may be committing the act of homicide while in prison.

Each of the economic variables of poverty and unemployment variables are significant. Poverty is significant since it usually provides fewer opportunities for individuals who live within its effects and may result in individuals entering a life of crime. Unemployment has a similar reasoning, noting again the lack of opportunity may cause some individuals to seek out alternative lifestyles that may include violent activity. As mentioned earlier by Skolnick (1995) some researchers believe the criminologist community needs to continue to develop a broader understanding of social, economic, and historical causes of crime. The results illustrated in the two economic variables show a significant association between unemployment/poverty and the homicide rate. Much the research on what causes crime points to causation from the underlying social needs and problems (Skolnick, 1995).

The three age groups of males exhibit an interesting pattern of significance. As noted in the literature review, these three age groups are known to capture a significant portion of the crime; Marvell and Moody, 2001 and Kovandzic et al. 2002. The lower and upper age groups exhibited an association to increasing the homicide rate, where the middle age group (population aged 20 to 24) exhibited an association in decreasing the homicide rate. First, percentage of population aged 15 to 19 is associated with a .291 increase in the homicide rate while holding all other variables constant. This significance is probably due to the fact young men coming of age and start to exhibit criminal behavior. For those individuals who also live in poverty and a state where the unemployment rate is high, this can be a significant concern. Second, population aged 20 to 24 is associated with a -.927 decrease in the homicide rate while holding other variables constant. This test of significance shows the opposite result of the previous studies of Marvell and Moody (2001) and Kovandzic et al. (2002). Before concluding this association was correct I reviewed the data to ensure its accuracy. The data was accurate, so I was confronted with explaining this result. Since this model incorporates six additional years I believe this result may have to do with generational differences. The generation comprising age 20 to 24 age group may be less prone to criminal activity or possibly less prone to committing the act of homicide. Another possibility is that the criminal justice system has efficiently managed individuals in that age group that are more likely to commit the act of homicide (i.e. incarceration). Third, the final age group of 25-29 is associated with a 1.276 increase in the homicide rate while holding all other variables constant. This significance follows the traditional significance of the crime rate studies on the population of Marvell and Moody (2001) and Kovandzic et al. (2002). Males of this age reach their peak criminal careers and are more likely then ever to commit a violent crime.

State use of death penalty as a deterrent is associated with a .425 increase in the homicide rate while holding all other variables constant. What is considerably interesting about States' use of the death penalty is states that do not use it have a lower homicide rate. A study by Donahue and Wolfers (2006) *The Penalty: No Evidence for Deterrence* note there is little

evidence the death penalty actually deters homicides, if it does it's a small percent, and there is some evidence it may increase the homicide rate.

States' use of three-strikes is associated with a .352 increase in the homicide rate per year while holding all other variables constant. In conflict with the earlier independent samples and paired t tests, the multiple regression analysis confirms the alternative hypothesis the homicide rate will increase in states that adopt three-strike laws. Examining the three-strikes impact with eight control variable exhibits the crime control policy has a significant effect on the homicide rate for the twenty-four states that implemented a crime control policy of this type into law. Is it safe to state three-strikes causes a significant increase in the homicide rate? Although significant at the .10 and .05 level, a sensitivity analysis demonstrates we fail to reject the null hypothesis at the .01 significance. It's a matter of individual interpretation depending how sure one wants to be.

Violent Crime Rate Regression

Marvell and Moody (2001) noted results of the homicide regression would be meaningless without corresponding results from regressing violent crime against the control variables. Marvell and Moody stated their reasoning by noting, "Since murders often arise out of other violent crimes, especially assaults and robberies, homicide trends are probably associated with trends in these crimes." To perform this test, state annual violent crime rate, less homicide, was calculated by summing the rates of rape, robbery and aggravated assault. This new variable was used as the dependent variable in the regression reported in Table 6

The regression in table 3 exhibit similar results from the regression in table 2. Although the adjusted R^2 and the F statistic dropped, the decrease is not dramatic so this model is significant and provides a useful addition to the homicide rate regression.

Notably States' adoption of three-strikes' is associated with a significant increase in the number of violent crimes committed. This result provides greater weight to the results reported in the homicide regression. States' adoption of three-strikes is associated with about a 46.4 (per 100,000 individuals) increase in the violent crime rate per year.

As observed in the homicide regression the age groups do not exhibit the same historical trends. In the violent crime regression age group 15-19 joins age groups 20-25 to be associated with a decrease in the violent crime rate. I will extend my assumptions from the earlier discussion of why age group 20 to 24 is associated with a decrease in the homicide rate to why a decrease is present in the violent crime regression.

Variable	Standardized Coefficients	
	<i>B</i>	<i>SE B</i>
% Prison Population	131.360***	41.480
Poverty Rate	5.059***	1.668
Unemployment Rate	15.888***	3.337
% African American	10.133***	.730
% Ages 15 to 19	-67.283***	10.242
% Ages 20 to 24	-46.861***	10.051

% Ages 25 to 29	63.757***	7.415
Death Penalty State	61.561***	12.957
Three-Strikes State	46.388***	13.440

$R^2 = .438$. $Adj R^2 = .434$. $F = 107.4$ $p < .01$. * $p < .10$. ** $p < .05$. *** $p < .01$

CONCLUSION

Although the results of the regression models disconfirmed the results of the t-test illustrating three-strike law are associated with an increase in the homicide rate, the model presented in this research possesses limitations.

First, a number of confounding variables used in previous research such as percent female headed households, employment rate, percent of population metropolitan, and real personal income. Second, the effect of states' with pre-existing habitual offender law, noted by Austin et al. (1999) are not measured in the model. Third, the research model provides analyzes application of three-strikes across the twenty-four states, but provides no analyses of the effect of individual strike laws. A state such as California, which is agreed upon by numerous studies to have the harshest Austin et al. (1999), Worrall, (2004), Stolzenberg and D'Alessio (1997), and Marvell and Moody (2001) three-strikes law may witness different results from a state such as Wisconsin that has a moderately strict law. Four, the issue of causality remains unresolved. There may have been events in individual states that may have caused a change in the homicide rate. There are limitations in this model; however, I believe the model provides evidence of a significant association between three-strikes and an increase in the homicide rate. The scope of this research is considerably vast and will take additional research to cover all the threats to external validity

The research design will include two strengths. First, time series analysis control best for maturation as a threat to internal validity because the observations capture how the dependent variable changes with the passage of time. Second, the time-series analysis rules out the issue of statistical regression. The research design of the time-series analysis will be longer than most of the previous research designs noting the pre- and post-intervention years of the analysis will range from 12 to 14 years.

In summary, "three strikes and you're out" has proven popular across the nation with twenty-four states enacting laws; however, the law does not decrease the homicide rate. Extending and partially replicating the research of Marvell and Moody (2001) this research has shown three-strikes law is associated with an increase in the homicide rate; however, additional research is needed to assess the laws impact within individual states.

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SCHEDULE OF TASKS

October – November 2007	<ul style="list-style-type: none">• Conduct literature review
December 2007	<ul style="list-style-type: none">• Submit and present final research proposal• Revision of research proposal
January 2008	<ul style="list-style-type: none">• Collect Secondary Data
February 2008	<ul style="list-style-type: none">• Begin analysis of data in PA 706 Data Analysis and Research Methods II
May 2008	<ul style="list-style-type: none">• Submit final research

DATA COLLECTION

Crime Statistics

Although the data is managed by the FBI, the crime statistics was taken from the Department of Justice, Bureau of Justice Statistics (BJS). Law enforcement agencies record the number of criminal act that they are notified of by victims, law enforcement officers, or other sources (Federal Bureau of Investigation, 2006). Theoretically, all the homicides committed in the United States for the period of question; however, such a list is unavailable since some homicides go unreported to law enforcement. The annual homicide rate per 100,000 inhabitants will be collected for each state during each year from 1982 through 2006.

Prison Statistics

Population estimates for percent of state population imprisoned will also be collected from the Bureau of Justice Statistics. State prison counts from all 50 states as of December 31 of the year in question will be used.

Census Data

Secondary data on population estimates and the poverty rate will be collected from the United States Census Bureau. The Census Bureau provided data on the three age male groups, percentage of population African American, and the poverty rate. Population estimates for each of these variables were taken for each year of the research, except for the years 1990 and 2000 when actual census data was available.

Unemployment Statistics

Unemployment statistics were gathered from the Department of Labor. Unemployment rates for all 50 states were gathered as of December of the year in question. Although the rate will be useful in examining the relationship between unemployment and homicides, the unemployment statistic does not reflect every individual who is not gainfully employed.

Death Penalty Data

Statistics on states that use the death penalty will be taken from the Death Penalty Information Center (DPIC). The DPIC possesses information on which states do and do not allow the death penalty and the years each state allowed executions.