Overcrowding and its effects on inmate violent behavior in prison

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OVERCROWDING AND ITS' EFFECTS ON INMATE VIOLENT BEHAVIOR IN PRISON

by

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Bachelor of Science
Rochester Institute of Technology
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ABSTRACT

Overcrowding and Its Effects on Inmate Violent Behavior in Prison

by

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Prisons in the United States are overcrowded. The problem of overcrowding has worsened as the years have gone on, especially since the war on drugs and determinate sentencing, have become a part of the American Justice System. This overcrowding has led to concerns about what effects it might have on those that are incarcerated. This study looks at the effects this overcrowding has on inmate violent behavior. Prison administrators are charged with providing a safe and secure atmosphere for inmates to serve the time that they are sentenced to by the states and federal governments. If this overcrowding is creating violence within the walls of the prisons, then the states and the federal government are not fulfilling their obligation and are subjecting inmates to cruel and unusual punishment, a violation of the 8th Amendment.

To examine the relationship between crowding and prison disorder, this study used data from the US Department of Justice’s 1995 Census of Adult Correctional
Facilities. Information on the numbers of inmates in custody compared with their design and rated capacities, and the number of violent occurrences within the facilities were used.
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CHAPTER 1

INTRODUCTION

The prison population has been increasing steadily throughout the 1980's and 1990's. The increase has taken place at such a rate that states have not had the resources nor the time to build the infrastructure to facilitate such a large growth in population. Three strikes legislation, the "War on Drugs", the change from indeterminate to determinate sentencing, and get tough legislation by politicians have led to this large influx of inmates to the federal and state prison systems. The result has been an overcrowding epidemic in the prisons, where cells designed to house one inmate are often holding two or three inmates. The concern then becomes are we creating more problems by stuffing these inmates into these prisons like sardines. The system has a title of "Corrections", because the original intent of the prison system was two-fold, to remove a person's freedom as punishment for committing a specific act, and to rehabilitate or correct an inmates behavior by educating and developing a trade for the person to work in once released from prison. The prison system of the latter 20th and now 21st century has become that of warehousing those that have been convicted of some type of criminal offense. Instead of correcting or rehabilitating the offenders, we are creating young people who are labeled as convicts, who know that there best chance of survival is to become better, often more violent, criminals.
My hypothesis for this study is that overcrowding leads to more violence within the prison walls. Whether it be the idea of spatial density or social density, it is hypothesized that overcrowding creates a situation where smaller percentages of inmates are allowed to participate in the programs in prisons that are designed to benefit them. This denial of anything to do is accompanied with the increased tension of having two or three inmates stuffed in a prison cell that was originally designed to only hold one. The stress or frustration that accompanies these close quarters may lead to aggression on the parts of many inmates who would not be as aggressive without these stressers.
CHAPTER 2

THE CAUSES OF OVERCROWDING

Growth in Prison Population

Figure 1 shows the growth of the prison population since 1980. The figure shows some astronomical numbers. In the period this data covers, there has been an increase of over 1 million inmates in state and federal prisons. This increase has shown itself to be steady, not once in this 22 year span has there been a decrease. This trend represents a 416% increase in the number of inmates incarcerated in state and federal prisons.

Figure 1. The growth of the prison population from 1980-2001.

Growth of the Prison Population

![Graph showing the growth of the prison population from 1980 to 2001.]

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Figure 2 displays the rate of incarceration, expressed as the number of persons incarcerated per 100,000 residents, over the same period. It indicates that the increase in prison population is not simply a function of a more general growth in the U.S. population. However, the data shows that, over the past two years, there has been a leveling off of the growth trend, with a decrease in 2001. Nonetheless, from 1980-2001, the rate of incarceration increased by 338%.

Figure 2. The number of sentenced inmates incarcerated under State and Federal jurisdictions per 100,000 population, 1980-2001.

Growth of the Inmate Population as Compared to Growth of Overall Population

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Causes of Prison Overcrowding

There are a number of explanations for prison overcrowding. Some researchers feel that the change from indeterminate to determinate sentencing has been one of the major factors in this overcrowding phenomenon of the 1980’s and 1990’s. Indeterminate sentencing sets a wide range of incarceration time, that can be varied based on decisions by parole boards, prison wardens, and other correctional officials depending on the specifics of a sentencing system. The determinate sentencing system is different in that there is a minimum set amount of time that a subject has to serve for each specific crime, there is no parole eligibility prior to the time this sentence is served. In 1975, all of the states of the United States had some form of indeterminate sentencing (Tonry and Hatlestad, 1997, p.6). Most states have since changed to determinate sentencing because the legislatures of the different states have questioned the rehabilitative effectiveness of the prison system, and felt that it was better to keep criminals in prison longer than to let them out without being rehabilitated. The change to determinate sentencing has been an across the board trend, from violent offenses to drug crimes to property offenses.

There has also been the enactment of the “three strikes” legislation in many states. The “three strikes” rule provides for those criminals that are convicted of their third offense of a certain category charge to have additional prison time added on to their original sentence. this is to ensure that they either don’t get out of prison, or at the very least don’t get out for a very long time. “Three Strikes” has been a policy prior to all of this media attention in many states under the guise of habitual criminal offender status. It only gained notoriety when the catchy phrase of “three strikes and you’re out” was attached to it.
One researcher agrees that the change to determinate sentencing makes a difference in prison population growth, but states that this change to determinate sentencing, coupled with the war on drugs, has been the main cause of overcrowding. Based on her research on the Illinois State Prison System, Joyce (1992) states that the prison population growth is determined by three major components: how many offenders are sentenced to prison, how long they stay in prison, and the rate at which they return.

From 1979-1989, she found an increase in the Illinois State prison population of 100%, whereas the crime rate increased by only 12%, and the state population by only 3%. The two factors: determinate sentencing, which increased the amount of time that inmates spent in prison, and the war on drugs which increased the number of crimes that could result in prison time were contributing factors to population growth in the prisons in Illinois. She found from 1984 to 1991, the number of drug related arrests increased from 518 to 4,361, to an increase of 742%. Joyce then goes on to explain the other connection between determinate sentencing and the war on drugs; they are both parts of political candidates “get tough” legislation. They are the two areas most talked about when politicians are asked what they can do about crime. Joyce states, “that public policy is determined by criminal laws, law enforcement priorities, and prosecutorial and judicial discretion” (Joyce, 1992, p.358). The politicians and the media who encourage people to think about these issues are doing this to get themselves elected, to sell newspapers, or to get people to watch television, because they know that nothing stirs emotions like fear.

Durham (1991) agrees that both changes in sentencing structure and drug enforcement have fueled prison crowding. He argues, “the advent of determinate-type
sentencing systems have been associated with increases in the prison population well beyond what might be expected from crime rates” (Durham, 1991, p.33). He concurs with the belief that the drug war has affected the overcrowding epidemic as well. In his research, he found that data on the federal prison system showed that from 1986 to 1988 79% of the total increase among those sentenced to prison, were for drug offenses.

Durham again concurs with Joyce’s ideas in the area of politicians and public policy. He states that throughout the 1980’s and 1990’s both liberals and conservatives alike wanted more money for aggressive law enforcement and drug interdiction. Also, that to accomplish this, both sides went along with promoting the idea of determinate sentencing, and the “just desserts” or justice model of punishment. Durham even cites an internal Justice Department memo that was published in a local paper, (Washington Post, February 28, 1988, p.3) from 1988 that discusses the topic of overcrowding in prison,

“The inmate population is growing at an average of 15 percent per year. The Department estimates that given the current capacity and only with additions envisioned by the administration’s current plan, overcrowding will increase by 72 percent by 1997. The demand for prison space thus will rise, but so will the voices of those who say we need fewer prisons and more ‘alternatives’ to incarceration. We must take the side of more prisons, and to polarize the issue we must attack those by name (such as Sen. Paul Simon) who take the other approach. We must stress why prisons are necessary by discussing retribution, deterrence, and incapacitation. Overall, of course, we must make the case that public safety demands more prisons” (Office of the Attorney General, Memorandum for Heads of Department Components, February 22, 1988).

Marvell and Moody (1996) studied the change from indeterminate sentencing to determinate sentencing in 10 states to see if there were any effects on the prison
population. Their study found it to be a mixed bag of results. In two states, Minnesota and Washington, they actually found that when the change to determinate sentencing was made that the prison populations decreased. In Indiana, they found that there was a substantial increase in the prison population. In the end, they came out stating that solely changing from and indeterminate sentencing model to a determinate sentencing model would not effect the prison population without additional contributing factors. If this change was to be accompanied by other factors such as the war on drugs or "get tough legislation then the likely result would be an increase in the prison population.

Wooldredge (1996) was looking to find a relationship between state level sentencing policies, the population of long term prison inmates in the state, and the level of crowding in a state. The research found that states with larger populations are more likely to have longer minimum prison sentences for felony convictions, more types of mandatory prison terms and guidelines for parole decisions. He found that there was an indirect relationship between sentencing and crowding. His research also discovered that there was a direct relationship between the long-term inmate populations and the degree of crowding. In his conclusion, he writes, "The contribution of this study does not necessarily lie in providing empirical verification for what people have been speculating for years, but rather in the finding that no single policy has a stronger relationship with crowding compared to any other". He finishes by stating that at the very least, this research shows that by "doing nothing", or trying to build our way out of the overcrowding situation will not work without changes related to policies dealing with sentencing and parole decisions.
Another researcher looked at the causes of overcrowding more from the business side. Bleich (1989) feels instead of the war on drugs, higher crime rates, and "get tough" legislation, that those involved in all sides of the correction industry are responsible for the overcrowding, or at least the perception of overcrowding. He suggests that legislators actually would prefer the public believe that prisons are crowded since it makes it look like they are being tough on crime, which translates to votes on election day. Legislators also exploit overcrowding to enhance economic growth in their districts. Overcrowding means new prison construction, which creates jobs for constituents. Both private and public institutions provide economic stimulus. The private prison industry, and the companies involved in this type of business would like to see it grow. To accomplish this, they support legislators who support "get tough" on crime legislation. There are also businesses which provide services for state run prisons that also contribute funding to politicians who represent their interests. In this way, the politicians can win in two separate ways, both in the public's perception and in their pocketbook. Administrators like this perception, because it gives them a basis for more funding, and allows them to have more control over the procedures of the prison. Bleich also says that those on the other side of the overcrowding dilemma benefit as well. The lawyers for inmates like the perception of overcrowding, because it gives them a basis for a lawsuit. Inmates even like this perception, because it often leads to early release programs to free up bed space for incoming inmates. This all comes down to those that are involved in the industry perpetuating this notion of overcrowding for corporate or personal gain.

Another study conducted in 1996 by Lilly and Deflem also looked at the economics behind the prison industry, and the effects that the businesses involved in
these industries have on the overcrowding problem. This study looks at the economic numbers of private companies that in one way or another serve the prison industry. Most of the data collected for this study was from the year 1994, when the 64 companies that were studied showed about $22 billion in annual sales. The authors say that to ignore the impact that this might have on the policies and operations of the corrections system in the United States would be, "analytically myopic and politically naïve". Companies with that type of money on the line have a lot to lose by having the prison population decrease due to more lenient sentences, and the indeterminate sentencing practices that would allow inmates to go free early. That kind of money can pay for a lot of lobbyists. They also ask the question, do people think that it is a coincidence that the companies that benefit from large prison populations are also the ones who create new technologies such as electronic monitoring. Technologies such as these, increase the prison population by giving parole and probation agencies more evidence to violate offenders with prison sentences hanging over their heads.

In a 1999 paper conducted by the U.S. Department of Justice, the topic is the reconsidering of indeterminate and structured sentencing. This paper points out that one of the principle problems of the sentencing of criminal offenders in this country is that there is, "no standard approach". In the past, all states and the federal prison system all operated under a system of indeterminate sentencing. The change to more structured sentencing and rules such as "three strikes", and the "85 percent rule" have all led to this increase in the inmate population. There are positives and negatives to both systems, and depending on your point of view, certain issues can be positive or negative. Indeterminate sentencing allows the professionals in a certain field such as judges, parole
boards, and corrections officials to use their judgment in determining a subject's sentence, or the amount of time that they remain in the system. Opponents of this approach contend that the system is biased, because so much power is put into these peoples' hands, that they can determine two different destinies for people convicted of the same criminal offense. The one thing that can be said is that crowding in correctional facilities has soared, since the change from determinate sentencing to the several forms of sentencing that exist today. Can it be said that this change is a direct factor that caused this crowding situation? Well, it is probably not the only reason, but by making inmates serve longer sentences due to rigid sentencing guidelines stating that inmates are required to serve at least 85 percent of their given sentence does not remove inmates from the system at the same pace as in the past. They also state that the political angle has contributed to overcrowding as well, "the reluctance of elected officials to advance policies that an opponent might characterize as soft" (Tonry, 1999, p.1). Indeterminate sentencing has been one of the topics exploited by political opponents as indicating that a politician is soft on crime.
CHAPTER 3

EFFECTS OF OVERCROWDING ON INMATE VIOLENT BEHAVIOR

This section examines the prior research on the effects of overcrowding on prison disorder. This section will follow a chronological order of many of the studies that have been conducted concerning this topic. The first person credited with conducting research in this area is Megargee (1977). He measured density by dividing the number of square feet inside of a facility by the monthly population to determine the number of square feet of living space available per man per month. He measured prison disorder by examining infraction rates. Disciplinary infractions are violations of prison rules and regulations that generate reports by officers. His study was conducted at the Federal Correctional Institution at Tallahassee, Florida over a three year period. He found that as the population of the prison increased, there was a decrease in living space, and a corresponding increase in disorder. He believed this to be based on previous psychological research conducted on crowding where people’s blood pressure levels rose and they became more tense due to being in crowded situations.

Also, in 1977, Nacci, P.L., Teitelbaum, H.E. and Prather, J., found a positive relationship between density and the number of disciplinary infractions taking place within the prison. Similar to Megargee, density was measured as the amount of square feet of living space each inmate had. The contrast to Megargee’s study was that this relationship only showed prevalence in facilities holding younger offenders. As more analysis was conducted on Nacci’s study, it showed a positive relationship in only two of the four types of facilities that were studied. Two types of facilities showed this positive
relationship between density and disciplinary infractions were those that specifically contained younger inmates and those housing older inmates.

Similar findings were noticed by L. Jan in a 1980 study. There again appeared to be a correlation between inmate assaults and density, specifically, in facilities which housed younger inmates and those that housed older inmates. Density, in this study, was again reflected by the amount of personal space each of the inmates possessed. The results of this study were refuted when indices such as the number of assaults on employees and the number of inmates held in disciplinary confinement were considered. Another 1980 study conducted by Bonta and Nanckivell found that population size and the rate of institutional misconduct inside of jails to be unrelated.

Some of the most extensive research was conducted by Verne Cox and his associates (1984). This study used archival data from 1953 to 1980 for the Federal Prison System and the state systems of Illinois, Oklahoma, Mississippi, and Texas. The researchers specifically chose data from this time period, because they felt that using data from a more recent time period would reflect protection from what has come to be a litigious society. These researchers felt that to protect themselves against lawsuits, prison administrators would alter the data to show no effect. The research produced similar results to Megargee. Prisons which had increases in their inmate populations without proportionately increasing capacity, had increased numbers of death, suicide, disciplinary infractions, and psychiatric commitments. Cox et al. also found that the reverse was true: decreases in population were associated with decreases in death rates, psychiatric commitments, inmate-on-inmate assaults, attempted suicide, and self mutilation. The results of this study also showed that doubling of single cells or the use of double
cubicles yielded negative effects on housing ratings, disciplinary infraction rates and illness complaints as compared to singles.

In 1982, Smith took a different approach to the study of effects of prison density. Instead of looking at the numbers, he instead found a facility in which the population exceeded the originally intended capacity by four times, and conducted interviews with inmates to find out their perceptions of their living situations. The overcrowding was quite extreme. Based on his measurements, each inmate only had 16 square feet of living space, this included both their cells and the common areas of the facility. Many of the inmates in this study felt they became more short tempered, and cited instances where other inmates would, “explode into an aggressive outburst over the slightest provocation”. Others stated that they felt that they had become more assertive, and more ready for, “aggression and displays of force”. The exact opposite feelings were felt by other inmates, they became more withdrawn and passive. They stayed in their cells much of the time, removing themselves from the rest of the population. Lastly, some of them expressed that they were so overwhelmed, that they were at the point of giving up. The perception of their predicament caused them these feelings of frustration. It is indicated in other studies, that the crowding does not cause the misconduct to take place, it just adds to the frustration felt by individuals in the crowding situation which intensifies the traits that are already there. The passive become more passive, the aggressive become more aggressive, crowding is just one of the factors that stimulates this intensification.

Ruback and Carr (1984) studied the effect of overcrowding in a woman’s prison. The researchers examined the records of 561 female inmates who had served at least six months in the Georgia Rehabilitation Center for Women. The first part of the study
focused on the effect of increased inmate population on the rate of disciplinary infractions. Their research showed that as the average population of the prison increased, the rate of disciplinary infractions increased as well. The relationship was found to be true even when controlling for the effects of age and race. Also examined in this study was the effect of higher density on inmates perceived control. The second part of the study used 73 female inmates selected at random from approximately 400 inmates in the facility. Density in this study was measured by the amount of square feet of living space of each inmate. One goal of this research was to see how the inmates' perceived feeling of control affected the prisoners' responses to their environment. The research showed prisons with higher density led to a decreased feeling of control. This decreased perception of control was found to have those inmates expressing more dislikes and problems with the environment in which they are confined. The decreased feeling of control leads to frustration, which is thought to be a factor in the increased number of disciplinary infractions, and may also be linked to violent behavior in the aspect that the inmates are acting out against the frustration.

Gaes and McGuire (1985) looked specifically at the effects of overcrowding on the number of assaults that took place within the prisons. Their study examined 19 federal prisons over a period of 33 months. Assaults were grouped into four different categories: inmate-on-inmate assaults with no weapon, inmate-on-inmate assaults with a weapon, inmate-on-staff assaults with no weapon, and inmate-on-staff assaults with a weapon. The findings indicated that as institutional crowding increased, inmate-on-inmate assaults with no weapon increased. The assaults against staff increased as well, but leveled off at the point when the prisons became 60-65% overcrowded. The rate at
which inmates assaulted other inmates with weapons did not increase until the overcrowding threshold was breached between 0-5%, but at this point, that rate at which assaults occurred increased unabated. Inmate assaults against staff with weapons decreased, as overcrowding continued to increase. Gaes and McGuire felt that as the population increased, staff became less tolerant to assaults. This could be simply more thorough searches of inmates, less movement as a whole, and more cell searches. These actions make the prison a more punitive environment for inmates deterring attacks against staff, and the possession of weapons.

In 1986, Ruback, Carr, and Hopper conducted additional research on crowding and the effect on the inmates perceived control of the environment. This research contained two studies using 50 randomly selected subjects from an institution housing 181 inmates, and 173 subjects from an institution housing 623 inmates. Square footage for each inmate was used as the measurement of density based on American Correctional Association standards. Their belief was that as crowding or social density increased, the inmates would feel that they have less control over their environment. The results of this study were similar to the Ruback and Carr study of 1984, in that there did appear to be a positive relationship between crowding and the perceived feeling of control. An increase in crowding was accompanied by a feeling of less control over the inmates living environment. This led to an increased feeling of stress, and dislike of their living environment. There was also an increase in the number of illness complaints.

Ekland-Olsen (1986) conducted research in the Texas Department of Corrections on overcrowding. He was conducting this research following the outcome of Estelle v. Ruiz (1980), in which the Texas State Supreme Court ruled the overcrowding in Texas
prisons subjected those in custody to increased violence and sickness. The justices stated that incarcerating inmates in this setting constituted cruel and unusual punishment. Specifically, the justices stated in their opinion that overcrowding "exercises a malignant effect on all aspects of inmate life". This study measured crowding both as spatial density and social density. The indicators of prison disorder were prison homicide rates, inmate-on-inmate assaults, inmate-on-staff assaults, disciplinary infractions, and major incident reports. Ekland-Olsen found no truth to this assumption by the justices. The data showed no connection between crowding and inmate-on-inmate violence. The data actually showed that there was a negative effect between crowding and the rate of prison homicides prior to the decision in the Ruiz case.

In 1988, Fry used data collected at the California Institute for Men at Chino, to determine whether the number of disciplinary infractions increased as the inmate population grew. Fry examined four different periods in his data. First, he examined the number of disciplinary infractions over a one year period where the average monthly population was over 1500. Then, he reviewed the following two six month periods, where the inmate population in the facility was under 1500, and lastly, he looked at a second 12 month period where the inmate population again rose above the 1500 mark. The results of this analysis were: 106 infractions from July 82’ to July 83’ when the average monthly population was 1575, 89 infractions from July 83’ to Jan 84’ when the average monthly population was 1090, 69 infractions from Jan 84’ to July 84’ when the average monthly population was 1372, and 78 infractions from July 84’ to July 85’ when the average monthly inmate population again rose above 1500. Fry’s findings thus do not support much of the past research in this area. In fact, when the two six month periods
when the inmate population were below 1500 are combined, the number of disciplinary
infractions is more than double (158) that of the number occurring between July 84’ and
July 85’ (78). His research did not show there to be a constant relationship between
overcrowding and infraction rates.

Leger’s (1988) study suggested the same relationship between the perception of
crowding and aggression shown by inmates, specifically aggression against inmates of
different races. He operationalized this aggression by using four indicators: fights against
members of the same race, fights against members of different races, the number of
arguments with officers, and the number of “writeups” or disciplinary infractions
received. Leger found that the perception of crowding was generally unrelated to fights
between members of different races or members of the same race. A positive but weak
relationship was discovered between the perception of crowding and the number of
arguments with officers. Also, this study found virtually no relationship between the
perception of crowding and the number of “writeups” that an inmate received. Again,
this does not support the earlier research concerning the effect of crowding on prison
disorder.

Pelissier (1991) examined the relationship between crowding and disciplinary
infractions at the Federal Institute at Butner, where there had been a large and immediate
increase in population without an equivalent increase in housing capacity. Over a six
month period, the federal prison received an influx of inmates that doubled the normal
population of the facility. During this same period of time, there was only a 30%
increase in housing capacity. Pelissier hypothesized that this increase in crowding would
result in an increase in rule infractions. This study showed no overall increase in rule
infraction rates among the inmates incarcerated. The data on inmate characteristics suggested that the rule infraction rates among inmates incarcerated for violent offenses rose, but not by a substantial amount. It was suggested by the author of this study, that both inmates and staff anticipated that security measures would be tightened because of the increased population. This increase in security measures never materialized, and the fact that the security measures were not tightened, lessened that tensions that many of the inmates expected. These findings would support the studies conducted by Ruback and Carr. The inmates perceived that they retained more control due to the lack of increased security measures when the influx of the additional inmates took place. This perceived control left them more content with their surroundings and less stressed.

Ruback and Carr’s 1993 study of 25 state prisons, 33 county prisons, and 7 transitional centers, (all part of the Georgia State Correctional System in 1989), examined the effect of density, one way to operationalize crowding, had on inmate behavior. They computed density by dividing the institution’s population by its’ maximum capacity. This study found that institutional density had a significant effect on both violent and non-violent inmate rule infractions. The research also showed that density affects infraction rates whether the population is increasing or decreasing. The authors felt that an increase in population makes the inmates, “face the effects of more people, greater uncertainty, cognitive load, and behavioral restrictions” (Ruback and Carr, 1993, p.145), as well as the officers enforcing rules more to maintain control. The increase in infraction rates during a decrease in population was suggested to occur because the officers now have more time to conduct inspections and random searches with lower
populations. This increase in searches led to the finding of more contraband, and therefore increasing the number of “writeups”.

In 1994, Gaes reexamined the topic of prison overcrowding and its effect on prison violence. Gaes states that he no longer feels that the results of his first study were genuine. He indicates that, “most prison crowding studies do not investigate intervening mechanisms that may account for a relationship between crowding and violence” (Gaes, 1994, p.329). His belief is that without addressing the proximal causes on violence in prison which he lists as: prison drug trafficking, homosexual relationships, predatory behavior, gang confrontations, arguments over thefts, valued possessions, and racially prejudicial behavior, there can be no determination that crowding solely influences prison violence. He believes that this was one of the methodological problems with his earlier research. Gaes indicates that crowding research doesn’t offer much information as to the effect of crowding and it’s interaction with these proximal causes of crowding. He then goes on to say that, “researchers in this arena, study the relationship between a crowding measure and some measure of inmate violence, and this is taken as evidence that crowding causes violence” (Gaes, 1994, p.336).

In 1995, McCorkle, Miethe, and Drass conducted a study using data from the 1986 and 1990 censuses of adult correctional facilities. Data from 371 state prisons was used to analyze what variables affected prison disorder. They state that there was a “failure to detect a measurable relationship between crowding and inmate aggression” (McCorkle et al. 1995, p.326). They stated however, that this was not “unanticipated” based on the previous research that had been done in this area. For dependent variables of prison violence, the used: inmate assaults against inmates, inmate assaults against
staff, and riots. The independent variables that they listed were as follows: whether the facilities were under court order, increased security, inmate-guard ratio, guard turnover, White-Black guard ratio, program involvement, the size of the facility, the unemployment rate, White-Black income ratio, and security. They state that poor prison management is a structural condition that fails to control and may promote, individual acts of violence in prison (McCorkle et al., 1995, p.329).

In 1999, the Media Awareness Project released some statistics on the California Department of Prisons problem of rising prison violence. The article stated that death tolls within the prison were the highest in 10 years. This article also stated that the system was also at one of its’ most crowded states, with over 161,000 inmates incarcerated in it’s 33 prisons, about double the capacity that they were intended to hold. Even though the California Department of Prisons is made up of 33 prisons, the deaths took place in only eight of the prisons. The article stated that assaults on other inmates that did not result in death had also risen over the previous year by 167 incidents totaling 6,392. Assaults on staff also rose during this time period to a total of 2,870 incidents where staff members were injured, an increase of 281. When asked what was felt to be the causes of the increases, a spokesman stated that there were many causes, but specifically overcrowding, and younger, more violent, criminals with longer sentences were to blame.

Research Questions

The research to be conducted in this study will have several research questions that will be expected to be answered. This study will look at the effects of several
independent variables on four dependent variables of prison violence. The first hypothesis would be that either or both types of overcrowding that are being researched will have a positive effect on prison violence. Specifically, as prisons become more overcrowded, I expect that the rate of assaults will increase. This should be true based on rated or design capacity. I expect to see that the percentages of race of officers and inmates have effects on prison disorder. Specifically, as the percentage of white staff members increase, the rates of violence will increase as well, and as the percentage of black inmates increases, the rates of violence will also increase. My belief would be that the more inmates per correctional officer, the more violence would be present. I expect to see that inmate populations with younger inmate populations have more problems with disorder. Lastly, I expect that in prisons where there are more inmates involved in educational or work programs, there will be less violence.
CHAPTER 4

RESEARCH METHODS AND PROCEDURES

The data for this study was provided by the National Archive of Criminal Justice Data (NAJCD), “Census of State and Federal Adult Correctional Facilities, 1995”, collected by the U.S. Department of Justice through the Bureau of Justice Statistics. The original dataset consisted of 1500 correctional facilities. I wanted to concentrate this research on males only, the largest population of convicted felons, and the more traditionally violent of the two sexes. A 1997 study by the Bureau of Justice Statistics shows that 48.5% of the male State prison population are incarcerated for violent offenses, as compared to only 28.2% of the female State prison population (Bureau of Justice Statistics, 1997, p.51). One of the arguments about prison disorder increasing due to overcrowding by Smith (1982), states that aggressive or violent inmates become more aggressive or violent, and the passive become more passive when they are faced with overcrowding. Another argument for choosing to study males only, is that in this particular dataset, I also removed all minimum security facilities, solely focusing on medium and maximum facilities. In this particular dataset, male only facilities make up about 85% of the medium and maximum security facilities (Bureau of Justice Statistics, 1997, p.13). Also, other than the one study conducted by Ruback and Carr, most studies about crowding and prison disorder use male inmates. The first step in narrowing down this dataset was to remove all facilities that specifically contained females or juveniles.
The next step was to remove all the facilities except for general population in custody facilities, no work programs, halfway houses, boot camps, or other such programs were used. To feel the effects of the crowding the inmates would need to be detained in a standard prison setting that severely limits the freedoms and avenues to escape the tension contained within a concrete and steel prison. The last step in narrowing down the dataset was to remove all of the minimum security facilities. It was suggested to me that due to the offenders in these facilities often being nonviolent criminals, that the results from these facilities would skew the results of the research. It was indicated in research by Smith (1982) that the tensions brought on by crowding make the aggressive more aggressive and the passive more passive, my belief being that many in the minimum security facilities would fall into the latter of the two categories. By doing this shrinking of the dataset, the final field was narrowed down to 543 state and federal facilities containing adult males classified as either medium or maximum security inmates.

**Dependent Variable**

Throughout the different studies that have been conducted concerning crowding and prison disorder, several measures of prison disorder have been employed. In this study, I chose to focus more specifically on prison violence, a specific aspect of prison disorder. The two main dependent variables used are the rate on inmate-on-inmate assaults (ASSAULT1), and the rate of inmate-on-staff assaults (ASSAULT2). These were coded by dividing the number of assaults of each type by the total population within each facility. The other dependent variables are inmate deaths resulting from assaults (DEATH), and whether or not riots occurred within the facility (RIOT). Inmate deaths
were coded as (Yes=1) and (No=0). Riots were singularly coded the same (Yes=1) and (No=0).

**Independent Variables**

The independent variables were chosen, because I feel that they are worthy of study concerning the topic of contributing factors of prison violence. The two major independent variables to be observed are the two measures of overcrowding (OVERCROWDING1) and (OVERCROWDING2). The first measure of overcrowding (OVERCROWDING1) looks at the total count of inmates in the facility divided by the rated capacity of the facility. This basically means that someone went into these facilities after they were constructed and decided that these prisons would be able to house a certain number of inmates, and any amount over that number would be considered overcrowded based on the rated capacity. The second measure of overcrowding (OVERCROWDING2) looks at the total count of inmates in the facility divided by the design capacity. The design capacity differs from the rated capacity, by being what the facility was originally designed to house based on architectural plans. The rated capacity would allow for more subjects to be placed in the facility by say double bunking cells which were originally intended to be single cells.

The next area that I wanted to look at involved the makeup of the facilities as far as staff and inmates are concerned. The specific area that I wanted to observe is the number of inmates per correctional staff member (CORRATIO). This was calculated by dividing the total count of inmates by the number of correctional staff at each facility.
The reason for this variable is to see whether or not there is a higher rate of violent occurrences when there are elevated numbers of inmates per staff member.

Another area of concern is that of age. It is suggested by some in the previous literature on the topic of prison disorder, that the younger an inmate population, the more likely it is that violence will be a problem. This is suggested by the studies conducted Jan (1980) and Nacci et al. (1977). The variable that represents this in this current study involve the number of inmates under 18 (UNDER18). My belief is that with the large gang and drug problems over the past couple of decades that involve younger offenders, the larger the representation of juvenile offenders sentenced as adults for committing adult crimes. Juveniles do not normally get their cases adjudicated in adult courts unless they concern charges of violence against others. Lance Corcoran, the vice president of the California Correctional Peace Officers Association, when asked about the increase of assaults against officers in 1998 stated in an article from the Media Awareness Project, “There’s a number of factors – overcrowding and we’re getting younger, more violent, criminal offenders with longer sentences who have less to lose”.

Next, I wanted to look at what effects race might have as it pertained to prison violence. The first independent variable that I used in this area was the percentage of white correctional staff members (WHTSTAFF). The reason that I chose this variable, is due to the disproportionate amount of black inmates in the correctional institutions, as compared to the race’s representation of the population as a whole, throughout the United States. My belief in this area would be that the higher the percentage of white staff, the more frustrated predominantly black inmate populations would feel based on their feelings of racial bias. I also believe that the higher the percentage of black inmates
(BLKIMS), the higher the incidents of prison disorder, specifically assaults on staff. Much of the previous research states that stress or tension in the prisons is what leads to violence, and I can’t think there could be a more stressful situation then the racial tensions that have existed for years between the races. Specifically, when one race has the power over so many of your personal freedoms within the setting of a prison, this has to lead to feelings of frustration.

I also wanted to look at a couple of program areas that I thought would possibly have a positive effect on inmates’ behavior in prison. The two that I looked at were educational and work programs. My basic belief would be that the higher the percentage of inmates in educational programs (EDUC) and work programs (WORK), the lesser the amount of inmate violence. This is an especially important topic in the current era of budget cuts taking place throughout many correctional systems on the state and federal level. If it could be proven that by offering more of these types of programs you could lower assault rates, it might make correctional officials take a second look at doing away with these programs when state officials come calling for cuts. Also, by doing away with these programs, are these officials encouraging more violence to take place causing an unsafe environment for inmates.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Coded</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSAULT1</td>
<td>Inmate Assaults on Inmates</td>
<td># of assaults/</td>
<td>.003</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>total count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASSAULT2</td>
<td>Inmate Assaults on Staff</td>
<td># of assaults/</td>
<td>.002</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>total count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEATH</td>
<td>Inmate Deaths from Assaults</td>
<td>Yes = 1</td>
<td>.009</td>
<td>.290</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No = 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RIOT</td>
<td>Riots in the Facility</td>
<td>Yes = 1</td>
<td>.140</td>
<td>.350</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No = 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Coded</td>
<td>Mean</td>
<td>Std. Dev.</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------</td>
<td>------------------------------</td>
<td>-------</td>
<td>-----------</td>
</tr>
<tr>
<td>OVERCROWDING1</td>
<td>Total Count Compared to Rated Capacity</td>
<td>total count/rated capacity</td>
<td>1.073</td>
<td>.275</td>
</tr>
<tr>
<td>OVERCROWDING2</td>
<td>Total Count Compared to Design Capacity</td>
<td>total count/design capacity</td>
<td>1.040</td>
<td>.697</td>
</tr>
<tr>
<td>CORRATIO</td>
<td>Number of Inmates per Corrections Staff</td>
<td>total count/corrections staff</td>
<td>4.466</td>
<td>1.672</td>
</tr>
<tr>
<td>UNDER18</td>
<td>Percentages of Inmates Under Age 18</td>
<td>total count/# of inmates under 18</td>
<td>.000</td>
<td>.001</td>
</tr>
<tr>
<td>WHTSTAFF</td>
<td>Percentage of White Staff</td>
<td>total staff/# of white staff</td>
<td>.736</td>
<td>.216</td>
</tr>
<tr>
<td>BLKIMS</td>
<td>Percentage of Black Inmates</td>
<td>total count/# of black inmates</td>
<td>.508</td>
<td>.190</td>
</tr>
<tr>
<td>EDUC</td>
<td>Percentages of Inmates in Education Programs</td>
<td>total count/# of inmates in education programs</td>
<td>.239</td>
<td>.158</td>
</tr>
<tr>
<td>WORK</td>
<td>Percentage of Inmates in Work Programs</td>
<td>total count/# of inmates in work programs</td>
<td>.692</td>
<td>.250</td>
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</table>
CHAPTER 5

RESULTS

Bivariate Analysis

Table 3 shows correlations between the independent variable and inmate-on-inmate assaults (ASSAULT1). These correlations indicated statistically significant relationships between inmate-on-inmate assaults (ASSAULT1) and crowding using the design capacity standard (OVERCROWDING2), the number of inmates per correctional staff member (CORRATIO), the percentage of inmates under the age 18 (UNDER18), and the percentage of inmates in work programs (WORK). There is a positive relationship between the measure of crowding based on design capacity (OVERCROWDING2) and inmate-on-inmate assaults (ASSAULT1), indicating that as crowding increases, the rate of inmate-on-inmate assaults increases. The number of inmates per correctional staff member (CORRATIO) and inmate-on-inmate assaults (ASSAULT1) have a negative relationship, indicating that the more inmates that there are per correctional staff, the lower the rate of inmate assaults on other inmates. The third significant relationship was between the percentage of inmates under the age 18 (UNDER18) and inmate-on-inmate assaults (ASSAULT1). This was a positive relationship stating that as the percentage of inmates under the age of 18 increases, the rate of inmate-on-inmate assaults also increases. A negative relationship was observed
Table 3: Correlations between Independent Variables and (ASSAULT1) N=543

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERCROWDING1</td>
<td>-.029</td>
</tr>
<tr>
<td>OVERCROWDING2</td>
<td>.146*</td>
</tr>
<tr>
<td>CORRATIO</td>
<td>-.161*</td>
</tr>
<tr>
<td>UNDER18</td>
<td>.125*</td>
</tr>
<tr>
<td>WHTSTAFF</td>
<td>-.040</td>
</tr>
<tr>
<td>BLKIMS</td>
<td>.012</td>
</tr>
<tr>
<td>EDUC</td>
<td>.001</td>
</tr>
<tr>
<td>WORK</td>
<td>-.169</td>
</tr>
</tbody>
</table>

*p=<.05
between WORK and ASSAULT1. In prisons with a higher percentage of inmates in work programs, there are lower rates of inmate-on-inmate assaults.

Table 4 shows correlation relationships between independent variables and inmate-on-staff assaults (ASSAULT2). There are two independent variables in this correlation that show a statistically significant relationship with the dependent variable of ASSAULT2. The relationship between the number of inmates per correctional staff (CORRATIO) and inmate-on-staff assaults (ASSAULT2) is a negative one, indicating that as the number of inmates per correctional staff increases, the percentage of assaults on staff decreases. The second area that showed statistical significance was that of the relationship between the percentage of inmates in work programs (WORK) and inmate-on-staff assaults (ASSAULT2), a negative one. This would seem to indicate that as the percentage of inmates in work programs increases, the rate of inmate-on-staff assaults decreases. There were no independent variables that had a statistical relationship with the dependent variable of inmate deaths from assaults (DEATH), which is observed in Table 5.

Table 6 summarizes the relationship between the independent variables and the dependent variable, whether or not a riot took place within the facility (RIOT). There were two independent variables that showed statistical significance with RIOT. The two variables were crowding based on design capacity (OVERCROWDING2) and the percentage of white staff members (WHTSTAFF). In both cases, the relationship was negative. The data suggests that as overcrowding based on design capacity increases, the likelihood of a riot decreases. The data further indicates that as the percentage of white staff increases, the likelihood of a riot decreases.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERCROWDING1</td>
<td>-.049</td>
</tr>
<tr>
<td>OVERCROWDING2</td>
<td>.011</td>
</tr>
<tr>
<td>CORRATIO</td>
<td>-.224*</td>
</tr>
<tr>
<td>UNDER18</td>
<td>-.007</td>
</tr>
<tr>
<td>WHTSTAFF</td>
<td>.056</td>
</tr>
<tr>
<td>BLKIMS</td>
<td>.082</td>
</tr>
<tr>
<td>EDUC</td>
<td>-.036</td>
</tr>
<tr>
<td>WORK</td>
<td>-.254*</td>
</tr>
</tbody>
</table>

*=p<.05
<table>
<thead>
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<th>Independent Variable</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERCROWDING1</td>
<td>.027</td>
</tr>
<tr>
<td>OVERCROWDING2</td>
<td>-.030</td>
</tr>
<tr>
<td>CORRATIO</td>
<td>.003</td>
</tr>
<tr>
<td>UNDER18</td>
<td>-.040</td>
</tr>
<tr>
<td>WHTSTAFF</td>
<td>-.027</td>
</tr>
<tr>
<td>BLKIMS</td>
<td>.021</td>
</tr>
<tr>
<td>EDUC</td>
<td>-.065</td>
</tr>
<tr>
<td>WORK</td>
<td>-.078</td>
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*=p<.05
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERCROWDING1</td>
<td>-.071</td>
</tr>
<tr>
<td>OVERCROWDING2</td>
<td>-.137*</td>
</tr>
<tr>
<td>CORRATIO</td>
<td>.166*</td>
</tr>
<tr>
<td>UNDER18</td>
<td>-.061</td>
</tr>
<tr>
<td>WHTSTAFF</td>
<td>-.158</td>
</tr>
<tr>
<td>BLKIMS</td>
<td>-.058</td>
</tr>
<tr>
<td>EDUC</td>
<td>.013</td>
</tr>
<tr>
<td>WORK</td>
<td>.028</td>
</tr>
</tbody>
</table>

* = p < .05
Multivariate Analysis

The second stage of the analysis was conducted using linear regression. When conducting these regressions, I wanted to observe differences in the two measures of overcrowding – design versus rated – included in this study. To accomplish this, separate models were run using one of the two crowding measures. In the following tables that summarize findings from the regression analysis (Tables 7-10), Model 1 includes rated capacity (OVERCROWDING1). Model 2 includes design capacity (OVERCROWDING2).

The first linear regression generated was Table 7, which looked at the independent variables and inmate-on-inmate assaults (ASSAULT1). There were three dependent variables that had significant relationships with ASSAULT1: the number of inmates per correctional staff (CORRATIO), the percentage of inmates under the age of 18 (UNDER18), and the percentage of inmates in work programs (WORK). CORRATIO and ASSAULT1 had a negative relationship. This would indicate that as the number of inmates to correctional staff increases, the rate of inmate assaults on other inmates’ decreases. A positive relationship was observed between UNDER18 and ASSAULT1. As the percentage of inmates under the age of 18 increases, the rate of inmate assaults on other inmates increases. The variable of WORK showed to have a significant negative relationship with ASSAULT1. This data would suggest that the higher the percentage of inmates in work programs within a facility, the lower the rate of inmate-on-inmate assaults. Note that in both models, regardless of which measure of overcrowding was
used, there was statistical significance for these three variables. The strengths of the relationships were not completely the same, but the numbers were very close.

Table 8 looks at the relationship between independent variables and inmate-on-staff assaults (ASSAULT2). This analysis showed three variables in Model 1, and five variables in Model 2, that indicated statistically significant relationships with the dependent variable. The three dependent variables in Model 1 that indicated significance were the number of inmates per correctional officer (CORRATIO), the percentage of black inmates (BLKIMS), and the percentage of inmates in work programs (WORK). The relationship between CORRATIO and ASSAULT2 was a negative one, indicating that as inmate/staff ratios increase, the lower the rate of inmate assaults on staff. The relationship between BLKIMS and ASSAULT2 was positive, as the percentage of black inmates in a facility increase, there is a corresponding increase in the rate of assaults on staff. The third relationship was a negative relationship between WORK and ASSAULT2. This would again show that as the percentage of inmates in work programs increases, the rate of assaults on staff decreases. The five variables that showed statistical significance in Model 2 were: crowding based on design (OVERCROWDING2), the number of inmates per correctional staff (CORRATIO), the percentage of white staff (WHTSTAFF), the percentage of black inmates (BLKIMS), and the percentage of inmates in work programs (WORK). A negative relationship was found between OVERCROWDING2 and ASSAULT2, indicating that as the number of inmates increases past a facilities design capacity, the rate at which staff are assaulted decreases. The relationship between CORRATIO and ASSAULT2 was also a negative one, suggesting that as the number of inmates per officer increases, the rate of assaults on staff
### Table 7: Linear Regression Analysis of Independent Variables and (ASSAULT1)

**N=543**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>Beta</td>
</tr>
<tr>
<td>OVERCROWDING1</td>
<td>.021</td>
<td>...</td>
</tr>
<tr>
<td></td>
<td>(.007)-SE</td>
<td></td>
</tr>
<tr>
<td>OVERCROWDING2</td>
<td>...</td>
<td>.064</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.003)-SE</td>
</tr>
<tr>
<td>CORRATIO</td>
<td>-.133*</td>
<td>-.129*</td>
</tr>
<tr>
<td></td>
<td>(.001)-SE</td>
<td>(.001)-SE</td>
</tr>
<tr>
<td>UNDER18</td>
<td>.120*</td>
<td>.120*</td>
</tr>
<tr>
<td></td>
<td>(.146)-SE</td>
<td>(.145)-SE</td>
</tr>
<tr>
<td>WHTSTAFF</td>
<td>-.017</td>
<td>-.033</td>
</tr>
<tr>
<td></td>
<td>(.010)-SE</td>
<td>(.010)-SE</td>
</tr>
<tr>
<td>BLKIMS</td>
<td>.041</td>
<td>.015</td>
</tr>
<tr>
<td></td>
<td>(.011)-SE</td>
<td>(.012)-SE</td>
</tr>
<tr>
<td>EDUC</td>
<td>.005</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>(.012)-SE</td>
<td>(.012)-SE</td>
</tr>
<tr>
<td>WORK</td>
<td>-.134*</td>
<td>-.126*</td>
</tr>
<tr>
<td></td>
<td>(.008)-SE</td>
<td>(.008)-SE</td>
</tr>
</tbody>
</table>

*=p<.05  
()=SE
decreases. The percentage of white staff (WHTSTAFF) and inmate-on-staff assaults (ASSAULT2) have a positive relationship, inferring that as the percentage of white staff members increases, the rate at which assaults on staff members occurs increases. The relationship between the percentage of black inmates (BLKIMS) and inmate-on-staff assaults (ASSAULT2) is also positive. This leads us to see that as the percentage of black inmates’ increases, the rates of assaults on staff increase as well. Inmates in work programs (WORK) and inmate-on-staff assaults (ASSAULT2) had a negative relationship, indicating that as the percentage of inmates in work programs increases, the rate of assaults on facility staff decreases.

Table 9 presents findings from a regression of the dependent variable inmate death (DEATH). The linear regression analysis of the independent variables and this dependent variable indicated only one statistically significant relationship. A negative relationship was found to be present between the percentages of inmates in work programs (WORK) and whether or not there were inmate deaths that resulted from assaults (DEATH). This would again suggest that the more inmates in work programs, the lower the number of inmate deaths from assaults. This appears to be true with all the dependent variables up to this point. This relationship was again shown to be true using either measure of overcrowding.

The results of the linear regression on prison riots (RIOT) can be found in Table 10. Five independent variables had statistically significant relationships with the dependent variable RIOT, these were: crowding based on rated capacity (OVERCROWDING1), crowding based on design capacity (OVERCROWDING2), the number of inmates per correctional staff member (CORRATIO), the percentage of white
Table 8: Linear Regression Analysis of Independent Variable and (ASSAULT2)

N=543

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
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<td></td>
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<td>...</td>
</tr>
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<td></td>
<td>(.006)-SE</td>
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</tr>
<tr>
<td>OVERCROWDING2</td>
<td>...</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>(.002)-SE</td>
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<tr>
<td>CORRATIO</td>
<td>-.163*</td>
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<tr>
<td></td>
<td>(.001)-SE</td>
<td>(.001)-SE</td>
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<td>(.111)-SE</td>
<td>(.111)-SE</td>
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<td></td>
<td>(.008)-SE</td>
<td>(.013)-SE</td>
</tr>
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<th>Model 2</th>
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<td>(0.941)-SE</td>
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0=SE
staff (WHTSTAFF), and the percentage of black inmates (BLKIMS). Both measures of overcrowding indicated a negative relationship with RIOT. This suggests that whether crowding is increasing based on a rated or a design capacity, there is less of a likelihood that a riot would occur. There was a positive relationship between inmate/staff ratios and prison riots, indicating that as the number of inmates per correctional officer increases, the greater the likelihood that a riot could occur. This was true using either measure of overcrowding in this study. The percentage of white staff members (WHTSTAFF) and whether or not a riot took place within a facility (RIOT) indicated a negative relationship, suggesting that the higher the percentage of white staff members within a facility, the lower the chance of having a riot occur. The last relationship that was observed was a negative one between the percentage of black inmates (BLKIMS) and whether or no a riot took place (RIOT). This shows that as the percentage of black inmates within a facility increase, the chance of a riot occurring decrease. The findings in this relationship occurred when either standard of crowding was examined.
Table 10: Linear Regression Analysis of Independent Variables and (RIOT) N=543

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*=p<.05
0=SE

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CHAPTER 6

DISCUSSION

The bivariate analysis of the independent variables and the four dependent variables did produce some interesting results. The variable concerning overcrowding as compared to a prison's design capacity indicated statistically significant positive relationship with the rate of inmate assaults on other inmates. This would indicate that as the population of a prison increases over its' design capacity, the number of inmate-on-inmate assaults increase as well. Inmate-on-inmate assaults were shown to be positively affected by the percentage of inmates in a facility under the age of 18. Another correlation was found between the number of inmates per correctional staff member, and both assaults on other inmates' and assaults on staff. In both cases, the higher the inmate to officer ratio, the lower the rate of assaults. Both categories of assaults were shown to be negatively affected by the percentages of inmates in work programs. As the numbers in work programs went up, the numbers of assaults went down. There were no independent variables that had any significant relationships with inmate deaths that resulted from assaults. The variable concerning whether or not facilities had incidents of riots occur had two variables that showed relationships. A significant negative relationship was found in the area of overcrowding based on design capacity and the incident of riots. This would indicate that as this level of overcrowding increases, the chance of having a riot occur decreases. The second area, indicated a significant negative
relationship between the percentage of white staff members in a prison, and the occurrence of riots. This would indicate that as the percentage of white staff increases, the chance of a riot occurring decreases.

The linear regressions conducted in the areas of prison violence concerning inmate assaults on inmates and inmate assaults on staff showed quite a few relationships that were significant.

**Inmate-on-Inmate Assaults**

Inmate assaults on other inmates had three significant predictors. It was seen that the more inmates there are to correctional officers, the lower the rate of inmate assaults on other inmates. This is consistent with the relationship found by McCorkle et al. (1995) in their study. I would have believed this to be the opposite. My only thought would be that perhaps a majority of the assaults on inmates took place in facilities that were more maximum security, and the medium security facilities which would make up a majority of the facilities studied would offset the data. The medium security facilities would have more inmates to corrections officer, and should contain less violent offenders. This could lead to this relationship.

The next relationship was found between the percentages of the inmate population under the age of 18, and the rate of assaults on the other inmates. This indicated that as the percentage of inmates under the age of 18 increased, the rate of assaults increased as well. This was a predictable result for a couple of reasons. First, the studies that were conducted in the past, by Jan (1980) and Nacci et al. (1977) seemed to indicate this relationship. The other reason that this should be predictable, is that in the majority of
cases, the reasons that juveniles enter into the adult prison system is due to committing violent offenses. For instance, the only crimes in the State of Nevada, in which those under the age of 18 are charged as adults, and enter into the prison system automatically is for arrests on Attempt Murder and Murder. The inference could be made that people that are convicted of these types of crime would tend to be more violent.

The last variable that shows significance is that concerning work programs. It was again found that as percentages of inmates enrolled in work programs increased, the rate of inmate-on-inmate assaults decreased. It seems easier for men specifically to adjust to the prison or jail environment when they have something to keep them busy. It is important to note that these relationships showed to be constant no matter what the measurement of overcrowding, and the same relationships were found when correlations were conducted. These findings are again consistent with the findings by McCorkle et al. (1995).

**Inmate-on-Staff Assaults**

The second measurement of prison violence was operationalized using the rate at which inmate assaults on facility staff took place. The relationship between the measurement of overcrowding using the design capacity was shown to have a relationship opposite to that of the original hypothesis. A decrease in the rate of assaults on facility staff was seen, as this rate of overcrowding was increasing. I am unsure as to what might be the cause of this. It could be that overcrowding is worse in facilities that are medium security and contain less violent offenders. If these offenders are more passive, then maybe it is like Smith (1982) states, the passive become more passive and
more withdrawn when the spatial capacity is more crowded. The next relationship was
the negative relationship between the number of inmates per staff member and the rate at
which inmate-on-staff assaults took place. This again shows that the more inmates there
are per staff member, the lower the rate of assaults. I discussed a similar relationship
between the number of inmates per correctional staff and inmate-on-inmate assaults in a
previous paragraph, and I believe that the reasoning for the relationship is the same.

Two independent variables that showed significance in the linear regression, that
did not show any relationship when correlations were conducted were that of the
percentage of white staff and the percentage of black inmates. The percentage of white
staff showed a positive relationship with this rate of assaults on staff, and the percentage
of black inmates also showed a positive relationship with this measure of prison violence.
These results indicating that as the percentages of these groups' increases, the rate of
assaults on staff members also increases. The relationship between the percentage of
black inmates and the rate of assaults on staff was found with either measurement of
overcrowding. The percentage of white staff only showed significance when the design
capacity was used as the measure of overcrowding, but did not reach statistical
significance when rated capacity was included in this study. This relationship was one
again, that I would have thought existed. No matter how many years go by, the tensions
between the races continue to exist. It is also not hard to see the similarities between the
days of slavery and the environment in prison. Prison staffs are predominantly white, and
the inmate population is predominantly black. The staff has the power, and the inmates
follow orders given to them by staff or they are punished.
Work programs were again shown to have a negative relationship with this measure of prison disorder. The regression showed the strongest relationship of any that were indicated at any other part of this study. Work programs really seem to be a common theme of this research. The more the inmates are involved in work programs, the lower the rate of inmate-on-staff assaults. Again, this is consistent with the similar study conducted by McCorkle et al. (1995).

Inmate Deaths

The percentage of inmates in work programs was the only significant predictor of inmate deaths. As with the previous two dependent variables, the relationship showed that as the percentage of inmates in work programs increased, the likelihood of deaths occurring from assaults decreased. This reinforces what the relationships found between work programs and inmate-on-inmate assaults and inmate-on-staff assaults stressed that by keeping the inmates busy with something to do, the less likely they are to participate in violent activities within the facility.

Riots

Overcrowding based on rated capacity was found to be inversely related to prison riots. The more crowded a facility, the less the likelihood that a riot will occur. This was also true when the measure of overcrowding was based on the design capacity of the facility. The only linear regression that showed any statistically significant relationship between the variables of overcrowding and the indicators of prison violence was opposite
of my original beliefs prior to conducting the literature review. There were still other areas under this topic of riots that witnessed statistically significant relationships. There was a positive relationship between the number of inmates per correctional staff and the likelihood that a riot would occur. When inmates gain more numerical superiority to the correctional staff, the higher the likelihood that a riot could get set off. This would make sense in that the more inmates there are per officer, the less likely the staff would be able to quell a riot just based on numbers involved. Also, during periods where inmates outnumber the staff, programs are often stopped based on security reasons, and there is also more lockdown time based on higher inmate ratios to staff. The question as to whether or not the race of these officers have an effect on whether or not inmates are more willing to riot, indicates that there is a negative relationship. As the percentage of white officers increases, the chance of a riot occurring decreases, the same is true for the makeup of the inmate population. As the percentage of black inmates in the prison population increases, the likelihood of setting off a riot decreases.

**Design Capacity vs. Rated Capacity**

From the literature review and the findings of this study, I believe that design capacity would be a better measure to predict prison disorder. The reasoning behind this is that the design capacity is what the facility was originally designed to hold. A rated capacity could be based on many factors. A large increase in the inmate population could lead to the rated capacity being increased, so as to not have the facility come under fire for too high a level of crowding. Also, this study is conducted using facilities from several states and the federal government, which more than likely have a different
definition or formula for rating the capacity of their facilities. The design capacities come from engineering standards which should be more even across the board than any rating system.

My original hypothesis for this study was that when the inmate population grew past the rated and design capacity of the prisons, the amount of prison violence or disorder would increase. I decided to measure this amount of prison violence by looking at inmate-on-inmate assaults, inmate assaults on facility staff, deaths that resulted from assaults and riots. These hypotheses were not justified by the results of this study. In fact, in both the categories, inmate assaults on staff, and whether or not riots occurred within the facilities, the opposite relationship was shown. The higher the overcrowding index rose, the lower the assault rate went, and there was less likelihood that a riot would occur.
CHAPTER 7

CONCLUSION

This is a topic that has become more and more of a concern over the past two decades. When I first started the endeavor of conducting this study, I was still early on in my career working as a corrections officer. Now, I have been promoted to a position of Sergeant, and with the responsibility of being the top ranking municipal officer on graveyard, it has become more of a concern. This study concerned specifically prison environments, but the idea of spatial density or crowding whichever descriptor that you decide to use, is a concern on the jail level as well. I can say from experience, that there is a difference of how a housing unit feels when there is only one inmate in each cell, and when there are three inmates stuffed into the same space. There is tension in the air that can be felt, and it makes you want to stay on your toes as an officer. Whether it is the case of being more likely that some type of violence may erupt, or as some of the literature states that the tension just intensifies the traits already possessed by individuals making them more aggressive, or more passive. Crowding does have its’ effects, I am unsure exactly what those effects are.

This study did not show what I predicted would be the relationship between the topics of overcrowding and prison violence, that I was studying. Some very interesting information came out during this study that I think could be of use in the future of corrections. The most important of these is the effect that work programs appear to have
on the number of assaults of all types that occur within a facility. In both types of
analysis, and utilizing both measures of overcrowding, the higher the percentage of
inmates involved in work programs, the lower the number of assaults. This would
indicate that we could make our prisons safer by offering the inmates that reside there
more work programs. Not to mention, that it would make our system more of a
correctional system, than what it has now become a system of warehousing criminals.
This study also indicated that as the number of inmates per correctional officer increases,
the rate of assaults decreases. Again, this is the opposite of what I thought, and I have
discussed what I think may be the cause of this in the discussion section. It did show
positive relationship between the percentages of the races of officers and inmates on the
rate of assaults on staff. I felt that this would be the case, based on years of problems
between these two racial groups. This would mean that the corrections profession has to
make a point of striving for more diversity in their employees. Most departments already
have programs in place to address this issue, but it is a slow road.

I am not disappointed by this study, as previously stated, I believe there were
some lessons learned, by the data that was analyzed. Also, as I progressed with the
literature review, I found more and more examples that seemed to indicate that my
hypotheses would be proven false, and that there would be no relationship between
crowding and inmate violent behavior.

One factor that I wish I could have explored more in depth was that of age. There
was not really a whole lot of data on age ranges, which is why I used the percentage of
inmates under the age of 18. This was one downfall of the data.
Finally, the overcrowding situation in the prisons and jails of this country does not appear to be changing. Corrections officials are charged with providing as safe an environment as possible in our prisons and jails, and anytime that violence seems to be increasing, it is on these officials to determine what is causing the violence and to do what they can to fix it. Overcrowding just this year has caused many jurisdictions in the southern part of the United States to begin conducting early releases based on orders from the Justice Department. The war on drugs doesn’t seem to be peaking anymore, but politicians wanting to appear that they are, “tough on crime” will continue to put large numbers of people in our prisons and jails. As is stated in much of the literature, this is not something that we will be able to build ourselves out of, and in the economic environment of today, that is really not an option.
REFERENCES


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