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Adult Offender Recidivism Rates: How Effective is Pre-Release and Vocational Education Programing and What Demographic Factors Contribute to an Offenders Return to Prison

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ADULT OFFENDER RECIDIVISM RATES: HOW EFFECTIVE IS PRE-
RELEASE AND VOCATIONAL EDUCATION PROGRAMING AND WHAT
DEMOGRAPHIC FACTORS CONTRIBUTE TO AN OFFENDERS RETURN
TO PRISON

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

In

The School of Human Resource Education
And Workforce Development

by

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
LIST OF TABLES	vi
ABSTRACT	viii
CHAPTER 1: INTRODUCTION	1
Introduction.....	1
Financial Pressures of Incarceration	1
Human Costs of Incarceration	2
Statement of the Problem.....	3
Objectives of the Study.....	4
Definition of Terms	8
CHAPTER 2: LITERATURE REVIEW	10
Introduction.....	10
Challenges of Organizational Change	11
Application of Research Based Programming	15
Social Strain Theory	18
Learning and Instruction	19
Investing in the Correctional Population (Return on Investment)	21
Structure of a Training Program	23
Cognitive Development	25
Education Programming Outcomes and Implications	26
Re-entry Programming Outcomes and Implications.....	37
Conceptual Framework.....	53
Summary	54
CHAPTER 3: METHODOLOGY	56
Introduction.....	56
Population and Sample	56
Program Intervention	59
Data Types	60
Actual Data Provided.....	61
Methods of Data Analysis.....	62
Limitations of the Research	63
CHAPTER 4: FINDINGS	65
Introduction.....	65
Description of Sample Characteristics.....	66
Binary Logistical Regression Analysis.....	81
CHAPTER 5: SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS	90
Introduction.....	90

Summary	90
Conclusions.....	91
Implications.....	102
Recommendations.....	106
REFERENCES	109
APPENDIX A: INSTITUTIONAL REVIEW BOARD.....	114
VITA.....	115

LIST OF TABLES

Table 1	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the Entire Sample (1616)	68
Table 2	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the 100 hour Pre-Release Group (404)	69
Table 3	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the Vocational Education Sample (404)	71
Table 4	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the Control Sample (808)	72
Table 5	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for Recidivist for the Entire Sample (546)	74
Table 6	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for Recidivist for the 100 Hour Pre-Release Group (146)	76
Table 7	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for recidivist for the Vocational Education Sample (131)	77
Table 8	Demographic Characteristics of Gender, Race, Marital Status, Education and Age for recidivist for the Control Sample (269)	79
Table 9	Chi-Square Results for Total Recidivism Rates by Intervention.....	80
Table 10	Binary Logistic Regression of the Entire Offender Population on Demographic/Programmatic Indicators to Predict Recidivism	83
Table 11	Classification Results for Recidivism for the Entire Population During the Period of Release	84
Table 12	Binary Logistic Regression of the Offenders Completing the 100 Hour Pre-Release Program on Demographic Indicators to Predict Recidivism	85
Table 13	Classification Results for Recidivism for the 100 Hour Pre-Release Population During the Period of Release	86
Table 14	Binary Logistic Regression of the Offenders Completing the Vocational Educational Program on Demographic Indicators to Predict Recidivism	87
Table 15	Classification Results for Recidivism for the Vocational Education Population During the Period of Release	87
Table 16	Binary Logistic Regression of the Offenders that Completed no Programming on Demographic Indicators to Predict Recidivism	89

Table 17	Classification Results for Recidivism for the No Programming Population During the Period of Release	89
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ABSTRACT

The primary purpose of this study was to determine if the Louisiana Department of Public Safety and Corrections' 100 hour pre-release program and vocational education had a significant impact on offender recidivism. Additionally, a model of predicating offender recidivism using demographic data was another aspect of the study. Offenders in the study were 404 offenders who completed the pre-release program, 404 offenders who completed vocational education and 808 offenders who composed the control group. All offenders were released from prison in the year of 2010, and if they returned to prison between their release and December 31, 2013, they were considered to have been a recidivist for the purpose of the study.

The effectiveness of the 100 hour pre-release and vocational education was conducted using SPSS with the chi-square test for program significance. Based on the test, neither program was found to have a significant impact on recidivism. However, when examining percentages of return to prison between the three groups, vocational education offenders performed the best and offenders who completed the 100 hour pre-release program had the highest percentage of offenders returning to prison.

The ability to develop a predictive model for recidivism utilizing select demographic factors was attempted using SPSS with the Binary Logistical Regression analysis. The demographic factors used were age, sex, race, marital status and education. A predictive model was unable to be established with this population. However, when looking at the population, being a male or a young offender was found to be predictors that were significantly tied with offender recidivism as individual characteristics.

Based on the body of research and the findings of the study, recommendations concerning the 100 hour pre-release program and vocational education suggest these programs

need additional components of cognitive development training and community supports to show a greater impact on recidivism. Also, the creation of a reliable and valid risk model based on the total offender population is necessary. By implementing effective programs and having the correct offenders entering these programs, a reduction in recidivism may be more significant.

CHAPTER 1: INTRODUCTION

Introduction

The growth in the prison population in the United States over the last forty years has been well documented as it continues to increase at both the state and federal levels. In 2012, there were 1.6 million offenders in state and federal prisons with more than 700,000 offenders being released each year from these facilities. About one-half of these offenders were serving time for violent offenses, 19% for property crimes, 18% for drug or drug related offenses, and 9% for public-order offenses (Guerino, Harrison & Sabol, 2012). The number of Americans incarcerated in the United States appears to be extreme when looking at the overall population. While the United States makes up only 5% of the population of the entire world, approximately a quarter of the worldwide prison population is housed in this country. This is a staggering statistic that definitely bears further examination. This significant increase over the last several years has led to the United States having the highest rates of incarceration in the world. With this level of incarceration comes the notoriety of being labeled as a country with a Prison Industrial Complex whereby significant resources are expended on keeping individuals in prison who may have otherwise been free or serving considerably less time if their crime was committed in another in another part of the world other than the United States (Gudras, 2013).

Financial Pressures of Incarceration

One of the main issues with keeping so many individuals incarcerated is the cost, financial and human, associated with such an extreme public policy. While the United States incarcerates individuals at higher rates than anywhere else in the world, it is safe to assume that we also spend more of our resources incarcerating at such high levels. The costs of incarceration in the United States are alarming. Direct costs associated with keeping an individual in prison

for a year in the United States are as high as \$60,076 in New York and as low as \$14,603 in Kentucky. The average costs from all states are approximately \$30,000 per year of incarceration. However, these figures can be taken with some caution as states calculate costs associated with incarceration in different ways. Some states include all costs in their annual incarceration rates including maintenance of buildings, capital construction projects, benefits to staff, pension costs, offender medical care and many other factors. On the other hand, some states limit incarceration costs to actual direct offender care. This makes it difficult to get a true idea of how much a state spends on incarceration of offenders. This is what led to the significant differences in annual incarceration rates between states. (Henrichson & Delaney, 2012).

Human Costs of Incarceration

Henrichson and Delaney (2012) also looked at other factors related to costs of incarceration not only on the governmental entity incarcerating these offenders, but also other areas of the human condition. It was found that when individuals are incarcerated taxpayers incur additional costs associated with social services for the families of the incarcerated, child welfare costs if there is nobody to take care of the children of the incarcerated adult and also educational costs associated with child education without the benefit of parental contribution to the process. While this list may be limited, the ability to adequately cover all areas impacted financially by adult incarceration would require a study unto itself. Researchers also found that there are significant social costs associated with this level of incarceration. The families of these incarcerated individuals are significantly strained in various ways. Many times they cannot continue to live at a level that allows for basic needs without the additional income which causes a single parent to seek governmental assistance or work additional jobs. The children of these incarcerated individuals have their parental bonds broken only to see their parent on visiting day

in a stark visiting room or some only speaking briefly on the telephone. This can cause a lot of confusion in especially younger children who have significant adjustment problems in the home, school and the community when a parent is out of the home for an extended period. There is also a major disruption in the marriages of incarcerated individuals, with many not succeeding once a spouse is incarcerated for short or long periods of time. The spouse feels alienated and the relationship gets stressed many times ending in divorce. Another factor researchers found was a feeling of shame, stigma and anger by family members of the incarcerated individual. Loved ones in the community are often looked down upon by others when members of their family become incarcerated due to the stigma associated with criminal behaviors. Parents feel as though they have failed in the parenting of their children and this causes self-esteem and anxiety issues which can lead to many other psychological and medical problems. Finally, the ability to examine the need for expenditures on incarceration cannot be considered without looking at the collateral cost to other priorities in the governmental budgets. Every dollar we spend incarcerating an individual, is a dollar that cannot be spent on items such as health care for the poor or education. As the amount spent on incarceration increases state by state, funds for other vital governmental services continue to shrink.

Statement of the Problem

We are starting to see that the investment made in such a wide scale use of incarceration is one that is not paying dividends. In a recent study (Pew Center on the States, 2011) it was found that the level in which an offender recidivates across the country is between 43.3% and 51.8% over a period of three years from release. Additionally, two-thirds of these offenders were arrested within this period of release and may not have been incarcerated. This is an alarming trend considering that of the number of offenders releasing from prison, one-half of

whom return to incarceration by the end of their third year of release and two-thirds are arrested. With these types of results, the ability to continue on this path is not in the best interest of all involved. As professionals, we need to begin a process of examining the way we deal with individuals convicted of crimes and use evidence-based interventions that are proven effective in reducing recidivism. With the ability to reduce recidivism comes the ability to save resources in the form of finances that can be directed into areas that can provide a more positive return on investment. Additionally, the human toll of incarceration should be seen as most important as previously stated, the high rates of incarceration not only cause problems and issues for those incarcerated, but also cause problems and issues for those individuals that are left in the community such as children, spouses and family members.

Objectives of the Study

Objective 1. Describe the sampled offenders who released from prison in 2010 from the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 2. Describe the offenders who completed the 100 hour pre-release program while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status

- d) Highest Education Level
- e) Age

Objective 3. Describe the offenders who completed vocational education while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 4. Describe the control group of offenders who did not complete the 100 hour pre-release program or vocational education while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 5. Describe the offenders who recidivated from the entire population on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level

- e) Age

Objective 6: Describe the offenders who recidivated that completed the 100 hour pre-release program on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 7. Describe the offenders who recidivated that completed vocational education on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 8. Describe the offenders who recidivated from the control group population on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 9. Determine which program, Vocational Education or Pre-Release, has a more positive impact on offender recidivism.

Objective 10. Determine if a relationship exists between recidivism and offender's program completed and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 11. Determine if a relationship exists for those offenders who completed the 100 hour pre-release program between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 12: Determine if a relationship exists for those offenders who completed vocational education between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Objective 13. Determine if a relationship exists for the control group of offenders between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Definition of Terms

Department's Data Base (CAJUN): The Corrections Adult Justice Uniform Network is the Department's data base that stores all information on offenders who have been sentenced for a period of incarceration.

Incarceration: Having an individual secured within a correctional setting whereby they do not have the ability to leave on their own free will.

Offender: An individual who has been convicted of a felony offense and has served time in a correctional facility.

100 Hour Pre-Release Program: An education program consisting of ten specific modules that provide offenders with basic information relative to successful re-entry back into society. The program focuses primarily on soft skills offenders will need to transition back into the community.

Recidivism: The measurement of when an offender returns to a correctional facility due to a violation of parole status or for a new felony offense.

Recidivist: An offender who has been released from prison and has returned to incarceration. The offender must have been placed back under the care of a state correctional facility.

Release: The process when an offender exits a correctional facility and is returned to the community for possible parole supervision.

Vocational Education: The program of training offenders in some type of vocational program. This program is approved and supervised by the Louisiana Technical College system and provides for certification upon completion. The program is technical in nature and provides basic skills in order to perform certain job skills.

CHAPTER 2: LITERATURE REVIEW

Introduction

The task of reducing prison populations is something that has been placed on the forefront of correctional policy due to the inability of government at the state, local and federal levels to continue to afford the high cost to incarcerate a large number of offenders. Governmental entities are examining the need to release and transfer a large number of drug and non-violent offenders back into society by providing services to meet the needs of this high risk population. The approach to move offenders from correctional facilities to some type of community supervision is one that focuses on the need for various types of treatment for this population rather than incarceration with the main goal to save money and improve the rate in which offenders return to prison (Taxman, 2011). When one looks at the cumulative data that is most readily available, the unused human capital that is available in the country's prison system is astounding. Statistics show that at the end of 2007 there were 1,596,835 offenders housed in state and federal prisons. This equates to one in every 198 U.S. residents locked up in a correctional facility with little to no programs to assist the offender with necessary skills needed upon release. While most individuals in society appreciate the short-term benefits of the tough on crime policies that were established in the 90s, approximately 700,000 offenders were released from state and federal facilities in 2007. This is an increase of 20% from the year 2000 with the data showing the trend of offenders released back into the community continuing to grow (West & Sabol, 2008). However, the most current data from the Federal Government indicates that the state and federal prison populations have started to fall slightly with 1,571,013 offenders in custody at the end of 2012. This is a decrease of 27,770 from year end of 2011, a decrease in 2010 total year end offenders of 1,613,803 and a decrease of 25,822 from the 2007 numbers

above. It is evident that the current trend shows that the number of offenders in state and local correctional facilities has been on a steady decline over the last few years (Carson & Golinelli, 2013).

Currently the state of Louisiana incarcerates 41,327 offenders at the state level which has been remaining steady over the last several years after several years of growth. The ability of the state of Louisiana to not increase their population has been fueled by reforms in sentencing that have been focused on providing rehabilitation programming to offenders to assist with an earlier transition back into the community. Programming has primarily focused on vocational training of offenders while incarcerated with a large movement has been in the arena of offender re-entry resources shortly prior to release. The re-entry services have been provided at the correctional facility level with a specific program that was developed by Departmental staff to assist offenders with their transition back into the community. Overall, the state of Louisiana spends approximately half a billion dollars on incarcerating these offenders, and the ability to grow the state offender population is not an option due to significant budget constraints. Re-entry programming and vocational training has been identified as the quick budget fix to decrease offender correctional center population while also reducing the number of offenders who return to incarceration after release (LeBlanc, 2013).

Challenges of Organizational Change

Moving a correctional environment from one that focuses on incarceration to one that has a focus on providing treatment is challenging at best. Correctional environments are seen primarily as rigid and committed organizations with a need to maintain the status quo as it relates to how offenders are managed on a daily basis. However, when examining the need for organizational change, research shows that organizations that have the ability to be adaptive and

innovative, allowing for employees to be risk takers and are allowed to implement radical changes to the processes established within the organization. Employees who were innovators must be identified and supported with their new views and ideas on what improves operations of an organization. Additionally, they were not separated from other employees but were allowed to be integrated into the mainstream of the organization to work with stakeholders and others to implement ideas around change focused on the improvement of the organization (Beer & Walton, 1987). This type of forward and innovative thinking is something that needs to be embraced when discussing the need to change the overall mission of an organization. Especially when working with correctional organizations that are set in how processes and programs operate. The ability to be innovative and use new and exciting programming can revitalize a correctional system and move it forward toward positive change. We have the data and information about what is data driven as effective when working with offenders in a correctional environment.

While many in society can examine the prison population and determine them to be individuals as ones that can be thrown away from society and have no value, the ability to tap these vast numbers of individuals as a resource is something that must be examined from a human capital perspective. The most renowned author in the field of human capital theory is Gary S. Becker, who also won the Nobel Prize in 1992 for his work in the human capital theory (Becker, 1992). Becker does not specifically define human capital theory and gives a vague overview stating that “expenditures on education, training, medical care, [...] produce human, not physical or financial, capital because you cannot separate a person from his or her knowledge, skills, health, or values the way it is possible to move financial and physical assets while the owner stays put” (Becker, 1993). While researching to find a clear definition for the

term human capital I was able to find one closest to what I would consider to be clearly stated in terms that I could understand. The definition used by Martin Husz is as follows: “By human capital we mean the time, experience, knowledge and abilities of an individual household or a generation, which can be used in the production process” (Husz, 1998). The ability to use these incarcerated offenders in the arena of human capital is a somewhat new concept and is difficult to have policy makers look at these incarcerated individuals as persons who can contribute in a positive way to the economy. Swanson and Holton (2001) felt that the human capital branch of economics is the one which is most tied to the field of Human Resource Development (Swanson & Holton, 2001). They felt that as HRD professionals we need to begin a process by which we can show or demonstrate some type of return on investment or cost benefit analysis when recommending training or some other type of education program for any segment of society. Next, Swanson and Holton noted the need to be able to show that human capital represents a relationship between learning and increased productivity for any organization. The need to show individuals a new technique or a better way of working will teach them a new process that can be beneficial for years to come. This new process will have to be sold to the community and organizational leaders as a way to invest in the offender’s knowledge base with an increased productivity in society being the ultimate goal. Swanson and Holton also recognized the need for individuals to receive higher wages in turn for the higher productivity. This will have an impact of not only increased productivity and profits for the company that may employ these releasing offenders but also increased wages for the offenders. Therefore, both society and the employee or offender has a stake in the education and development process. Swanson and Holton (2001) understood the need to track this investment to not only show a benefit of the interventions but also the long-term results of such an investment. They indicated the need to

determine if the individual education and learning process is yielding the results necessary or do they have to go back to the beginning of the intervention and try a different approach. Having a data driven approach to training is important to the process and can show clear evidence of effective interventions to increase offender productivity and wages upon release to the community (Swanson & Holton, 2001).

The large amount of human capital available in our prison settings must be developed if we plan to meet the needs of employers as we try to move the State of Louisiana forward in a positive direction. Data from the Louisiana Workforce Commission indicates that Louisiana currently has 95,000 available jobs in the state that are currently going unfilled. Fifty-five percent of these jobs require that the applicant have an education level of a high school diploma or less and another 35% require some type of technical/vocational education. While these jobs are found to be non technical in nature, the availability of an applicant pool is almost non-existent currently within the state of Louisiana as most companies are now filling the need for these employees with out of state workers. The Louisiana Workforce Commission also reported that Louisiana continues to lose revenue due to the lack of skilled workers as many companies locate to other states where an adequate base of skilled employees resides (Eysinck, 2014). The ability to invest limited funding in our correctional facilities can engage offenders in the state labor force to fill these much needed technical and non-technical jobs. This type of mindset will be successful in two ways. Not only will this allow for the offender to be released into the community with a viable job but it will also allow employers to meet their demands for the required number of employees.

Application of Research Based Programming

When examining the need for offender programming, the ability to point to an expert in the field of corrections is necessary. Edward Latessa from the University of Cincinnati is renowned as an expert in this field as he has published multiple journal articles, consulted on the development of numerous programs, and has been used by the National Institute of Corrections as a consultant on multiple occasions related to program effectiveness. Latessa often cites the work of Lipsey in his research, as he is also renowned in the field of corrections research. Latessa and colleagues (2006) conducted research on 97 correctional programs and looked at their effectiveness as it relates to the risk of the offenders the programs served. This type of meta-analysis of program effectiveness in the field of corrections is somewhat limited so the review conducted was extremely important to the theory Latessa and many others subscribe to, namely that offenders need to be placed in programming not only according to their criminogenic needs but also to their risk to the community. The findings found in the research showed that offenders needed to be placed in programming according to their risk of re-offending upon release to the community. The risk can be established by utilizing several risk and needs instruments that focus on the number of past offenses, history of violence, and age at which criminal behavior started and if the offender was employed at the time of the arrest among other less significant items. When the researchers looked at the outcomes of the programs implemented, there was one significant finding that raised their attention. Low risk offenders who were placed in intensive programs or high supervision programs, recidivated more frequently than if they would not have been placed into any programming. Meaning that the intervention this population received had done more harm than good due to the higher rates of recidivism. They believed that this was due to a number of factors, one of which is that by

placing these offenders with high risk offenders often leads to the high risk offenders teaching them antisocial behaviors and becoming peer associates who in turn supported the increase in criminal behavior. The next finding was placing low risk offenders into these programs disrupted their ability to continue with current community social networks of education, employment and family. This disruption made it much more difficult for these offenders to re-establish this support system upon release from incarceration and often led them to additional criminal behavior due to this lack of community support. Finally, it was found that with the increase in community supervision for low risk offenders, probation and parole staff was very likely to discover technical violations that would cause a return to prison. Overall, the research clearly showed that the need to use an objective risk assessment tool is vital to effective outcomes. Additionally, when using an effective assessment tool, the ability to follow the recommendations of the tool has a direct impact on outcomes. Therefore, it is important for courts and practitioners in the field to choose a valid tool and stay committed to the recommendations generated by the instrument as it is easy to disregard the score of the assessment tool and make emotional decisions due to the current criminal act. At times this type of policy implementation can be difficult to stay committed to when dealing with crime victims, district attorneys, law enforcement and others who view the practice of not incarcerating any offender by leaving them in the community to receive services as being soft on crime (Lowencamp, Latessa & Holsinger, 2006).

Basically, what Latessa and his associates found is that when looking at correctional programming, money needs to be spent on what is proven to be effective and on the population that is in need or at risk of reoffending. Latessa equated this in another article to the concept used by the Oakland Athletics baseball team. The team was on a strict budget and had to make

some difficult decisions to stay competitive in the league. The team used a statistician to make many of the personnel and other decisions as they played games throughout the season. The use of statistics proved to be an effective way to play the season with the limits they had been given related to the team's budget. The research used wins per season and compared the Athletics who had the lowest budget to the Yankees who had the highest budget in the league. The Yankees had two more wins in the season and their cost per win was approximately four times greater than the Athletics. While the impact of what was called Moneyball could not be determined to be the effect of the number of wins due to the study not being scientific, the evidence is fairly strong that the ability to use statistics in this situation had some positive effect on the Athletics ability to win games. The researchers made the clear conclusion that when faced with limited funding, as is happening in most jurisdictions around the country, use these funds in a manner that works the best and is supported by statistics or evidence-based research (Cullen, Myer & Latessa, 2009). Bill Gates (2013) also recently weighed in on the importance of making decisions based in data and best practices. While Gates was indicating the need to have clear goals and collect data on these goals on a global scale, he was speaking in the context of improving the human condition. He indicated that a manager or agency not only needs to have clear goals but to also have and know the data that is reflected in these goals. The data must be reviewed regularly to gauge progress or lack of progress. The importance of using data to drive policy decisions is an important approach in spending scarce resources on any project around the world that is meant to improve the lives of individuals. This can be true for children in Africa or offenders in the United States.

Social Strain Theory

Additional research showed that the social strain of actually residing in prison may also increase recidivism. Listwan, Sullivan, Agnew, Cullen and Colvin (2013) actually examined the general strain theory in a correctional setting. Specifically, the researchers examined the exposure to strains associated with victimization, the perception of a threatening prison environment, and hostile relationships with other offenders and staff to see if these factors caused a negative impact on the offender re-entry process related to increased offender recidivism. The analysis of the data found that items were consistent with past research. Recidivism seems to be much higher for young minority offenders who are unemployed and who have little to no social support. These re-offenders also have high levels of criminal propensity. Taking these factors into consideration, the research found that a negative prison environment was associated with a high probability of re-arrest and incarceration. Additionally, those inmates who found the correctional environment to be fearful, threatening and violent were more likely to recidivate. Those offenders who had experienced negative relations with other offenders did increase in recidivism rates but not at a significant level. The data yielded the results that negative prison environments can be seen as a criminogenic factor for individuals who have been in this type of prison environment. This type of information presents the fact that prisons should not be seen as places for offenders to do what is considered hard time in a miserable environment so they would not want to return to prison. The old adage of scaring offenders straight is something that cannot be accomplished in this type of environment and provides more negative outcomes. We must come to the realization that prisons need to be managed for offender safety as a key to successful re-entry. Offenders need to feel as though they can rehabilitate themselves

in a positive environment and not have to live in fear of their surroundings to the point where their rehabilitative process has no impact.

Learning and Instruction

When examining individuals, including adult incarcerated offenders, the ability to provide programs that not only meet their needs but are also proven to be effective is vital to the program development process. Research shows that with specific interventions, the ability to retain knowledge and be able to apply this knowledge is effective. The need to use data-driven approaches not only to the correctional population being served but in a way in which they can learn the material and apply the material in real life situations once released is found to be a positive for the offender once released. As Latessa and his associates indicated in their article regarding funding for programming, money and resources must be spent in a manner that provides the best outcomes possible as driven by effective research and adequate data (Cullen et al. 2009).

Cognitivism theory focuses on the development of the brain through the introduction of new information and different information to create a schema or shelving effect in a person's mind (Daly, 2008). In a correctional environment, the ability to adjust an individual's schema can provide the likelihood that they will get a clear idea on how to stay and remain out of prison. Cognitivism allows individuals to build assumptions about items in which they are or were exposed to in the past. Velmans (2003) believed that cognitivism allows for the concept of free will and without embracing the concept of free will, the fabric of our society can be compromised. Also, that many individuals in our society would rather part with the idea of science than they would free will. Using this theory in a correctional setting allows for there to be no excuses from offenders as to why they engaged in criminal behavior and requires them to

accept responsibility for their actions. This also ties closely to the belief of Bandura (1986) that many times in using cognitive decision making, an individual's values and morals play an important role in what they do and how they perform. Through the use of morals, values and free will, cognitivism is a theory that can be aligned with in a correctional setting where offenders must change the manner in which they view their behavior and how this behavior causes problems with their interactions in society. Without making changes to an individual's thought process or introducing new information to change their values or moral make-up, they will continue to believe what they are doing is the way the world is supposed to work. Bandura (2001) took this theory further; introducing the idea of agentic transactions that are accomplished through an individual's produced social networks. Individuals have the ability to develop information and outcomes using three outside models of agency. These models are direct personal agency, proxy agency and collective agency. Individuals consciously develop these systems to assist with their cognitive development as it relates to various areas of the thought process and value development. Knowing how these social networks affect their criminal behavior is also important to having them adjust the way they see these interactions with these groups. Offenders need to see how these interactions have caused problems or issues for them in the past relative to their incarceration in a correctional setting.

Another issue with being able to embrace the cognitive approach to learning is grounded in the concept of Bloom's Taxonomy. This allows for the ability to clearly develop specific domains for learning at the cognitive level. Bloom was a pioneer in his field and his categories for each cognitive domain were easy to follow. The categories were knowledge, comprehension, application, analysis, synthesis and evaluation. These categories were ordered from simplest to the most complex (Bloom, Engelhart, Frust, Hill & Krathwohl, 1956). This clear establishment

of a learning process is easy for me to follow and understand. It also allows for information to be processed in a manner in which it can be mastered not only by way of actual data but how that data is applied, analyzed and evaluated. Bloom's Taxonomy provides the framework for someone to set specific goals and follow through on these goals to a level necessary to master specific information or actions. Using this taxonomy can be an effective tool for work in a correctional environment. Offenders must set goals and follow through on these goals to often times be successful with the ultimate goal of releasing and staying out of prison. Offenders need to understand that programs at the facility level can provide them with the tools necessary upon release but they must commit to learning the new behaviors.

The ability for an individual to accept change has for the most part come from a behavioral orientation but should be dealt with in a cognitive manner when working with offenders. Smollan (2006) found the need to examine how people respond to change and in what manner they should address any issues with change. The findings were that when a person takes change to an emotional level the ability to effectively deal with change can be problematic. However, when they take change from a cognitive perspective, the ability to adjust is much quicker and there is less stress on the person and the organization or focus of the change. Offenders have to deal with change on a routine basis. Having to examine their world and how they operate inside it can be stressful but is a must when working with this population. Getting them past the emotional aspect of change can be difficult but is necessary to address the cognitive factors of change.

Investing in the Correctional Population (Return on Investment)

The ability of a correctional organization to provide an effective training program to the offender population needs to consider what is effective when working with an adult population

or adult learners. However, having the ability to expend necessary funds can be a challenge when examining the need to provide a quality rehabilitative process versus other needs of the agency. Organizations, especially correctional organizations, must provide offenders with current and accurate training modules that have a direct impact on reducing their return to prison. Determining the return on investment can be a high priority for any organization during these current economic times. However, it can be difficult to complete given constraints within the literature. Stern (2011) found that the amount spent on training programs nationwide to be \$125.9 billion in 2009. However, it continues to be difficult to determine how well organizations were doing relative to their rate of return on this large monetary investment. A meta-analysis of various studies revealed no real effective methodology for determining the rate of return expected on a company's training program. Additionally, it was discovered that many organizations never embarked on the process of conducting a return on investment analysis, as many were not equipped to conduct such a review (Bartel, 2000).

Swanson and Holton (2001) also felt that the human capital branch of economics needed to be expanded in the field of Human Resource Development. Both felt strongly about the need to be able to begin a process by which we can show or demonstrate some type of return on investment or cost benefit analysis when it comes to organizational training programs. They believed that having the ability to show an organization that human capital represents a relationship between learning and increased productivity. Swanson and Holton discussed the need of being able to use the specific data metric of increased employee productivity as a means to show organizations that there is a true return on investment when resources are spent on training programs.

Return on investment as it relates to training in a correctional environment is not something that has been developed and is currently not being used. Correctional professionals need to understand and develop specific metrics to be able to determine the effectiveness of their training programs past the knowledge that is learned in the classroom. They must understand how well they do when looking at the cost benefit of training programs for offenders as it relates to the impact of the organization and its effectiveness. Person (2012) indicated the need for a most cost effective training program due to budget issues across the country and across the different types of agencies or programs. To demonstrate the need for better outcomes, she recommended that correctional professionals use current research to show that training in a blended environment is more cost effective. The blended concept uses virtual material with actual classroom or simulated training. Correctional professionals must look at metrics, other than cost, such as offender recidivism as a primary metric for an offender training programs. Owens (2012) also found that there is a definite need to continue to develop the blended learning approach. However, what she found was not only a need for the use of virtual tools but to also train educators on how to deliver the material in this blended environment. It was felt that many times the electronic portion of the course is available to individuals without the necessary support from an instructor to assist with guiding the material and supporting the learning process. Offenders can work on their own at their own pace which is a positive but must be provided with the necessary support and guidance to get through the material when they have questions or other types of issues.

Structure of a Training Program

Researchers have long discovered that training of individuals must have specific aspects attached to the program. Aguinis and Kraiger (2009) conducted a review of literature from the

year 2000 forward and found that training and development programs do provide benefit to an organization when done in a correct manner and with certain aspects in mind. These aspects include paying attention to needs assessments of organizations, pre-training mental status of individuals focusing in on individual motivation, how the training is designed and delivered, training evaluation by documenting success and finally the actual transferring of the training material. They found the need to look at who is being trained to ensure that training is geared towards their level relative to motivation and a number of other factors.

George Berkeley, the philosopher, was well known as an idealist and he wrote many works explaining his theories and concepts within his focus of how people learn. He is best known for his concept related to human knowledge as he contended that all existence can only be supported when there is some mind to know of it. Basically stated, when something exists it has to be perceived by the human mind. His theory was a direct assault on realism in that for matter to exist, it has to exist in the mind. Berkeley held that people make mistakes in assuming that such items as plants, animals or buildings exist where there is no mind to perceive them to hold them in context (Berkeley, 1910). This concept can be held true today as instructors need to make an actual assessment of the audience they will be training. According to Berkeley, if the audience is not aware of a topic and has no concept of the topic, they need to start at the beginning of the learning process. We must learn in the field of corrections that many of our offenders have no idea on how to hold down a job or even any type of work ethic. They have never been exposed to this type of lifestyle. The ability to provide information does not assist with the actual transfer of knowledge unless the offender is dealt with on a basic level prior to going into more complex tasks.

Cognitive Development

Research into cognitive development is a topic that has implications for evaluation of training effectiveness. Tichon (2007) found that when using technology for specific training, repetition is the key to effectively learning a desired skill. The use of simulated environments can be vital to the success of the training program. The ability to have a safe and secure environment to practice a skill allows for a comfort level that lends to a positive learning setting due to students practicing at their own pace. Individuals that are allowed to practice skills in this virtual setting prior to having to complete them in a classroom or live setting perform much better and can retain this information for a longer period of time. This type of program can lead to greater cognitive achievement in the students. This training also has implications in the current economic environment as classroom training time can be reduced if individuals arrive to the live learning site already knowing or are familiar with a large portion of the material that is going to be reviewed and practiced.

Another study looking at cognitive training outcomes, determined the link between declarative knowledge and performance. While this correlation was evident, the ability to make the link between structural knowledge and self-efficacy was also found to be significant. This allows for the ability to make the assumption that if an individual can show a high degree of structural knowledge, their ability to be self-efficient is something that can be predictive. Knowing the information is the basic building block for being able to implement what is being taught. This research has far reaching implications and would be interesting to view in other settings (Davis, Curtis & Tschetter, 2003). Another recent article by Matthews (2011) found that the need to support individuals in the move from declarative to performance based learning approaches. Matthews makes the argument that individuals can learn material through an e-

learning setting but trainers must go further to support the practical application of the material. He used the example; can a person learn to swim using an on-line course? Of course not, but they can learn the mechanics and other aspects of swimming prior to actually getting into the water. This example can be compared to what is learned in the scope of training for specific material. Matthews supported the use of practice during the course while also having the learner reflect on the ideas presented. Finally, he emphasizes the need to have the learners think about how this new skill can be applied to their own situation. The use of technology needs to bring the learner into higher level learning processes so it is not as easy as just presenting material without any type of job specific reinforcement.

Other researchers discovered the need to determine training outcomes from varying levels. As the above articles found the ability to judge cognitive levels, Tracey, Hinkin, Tannenbaum and Mathieu (2001) found something interesting when looking at training outcomes. They found the need to test teaching outcomes from a number of different levels. The use of this multilevel approach led to a model developed with four levels of outcome efficiency or effectiveness. The four levels necessary to adequately assess training outcomes are affective reactions, utility reactions, declarative knowledge and application-based knowledge. These four levels will allow any instructor to have a true gauge of how effectively the information delivered was not only retained but also how well the training can be applied in a practical setting.

Education Programming Outcomes and Implications

The most prevalent issue in correctional education is the level of unmet need due to the lack of necessary data on the offender population. Several attempts have been made to gauge the education and literacy levels of offenders as compared to the community populations. Studies

not only looked at offenders' formal educational level but also their quantitative literacy necessary to balance a check book or make simple computations necessary to move through life. Overall, the research found that offenders are an undereducated class of society when compared to the community and have lower literacy skills which equate to significant problems in handling some of the tasks that they face every day. Additionally, a significantly larger percentage of offenders reported that they did not receive any form of vocational training when compared to the same group of individuals in the community showing that this is an underserved population when it comes to education. The need for not only secondary education was very evident in the population, post secondary education was more important as a supplement to developing job and necessary life skills (Harlow, 2003). The state of Louisiana recently conducted a review of their entire state prison population to determine educational level of offenders in state run facilities. The overall documented average grade level completed for the population was the seventh grade with reading levels for these offenders at a lower rate. Many were found to be unable to read or complete simple math calculations during this assessment. During the examination of the prison population, the need for educational and vocational training was seen as a barrier to a transition back into society and having the ability to adjust to societal norms without committing additional offenses and returning to prison (LeBlanc, 2013).

While we continue to look at what works we need to keep in mind the previous discussion about our ability to fund programs and what gives us the biggest bang for our buck. Current policymakers tend to look at cutting correctional programs when looking at budget shortfalls as they feel these programs are not effective. However, recent research has been conducted to show the cost-benefit of implementing educational programs. Aos, Miller and Drake completed a report in 2006 that showed the cost benefit analysis of offenders receiving

different types of education programming prior to release. They examined the current recidivism data in the state of Washington of 9% and 7% percent reductions for offenders who participated in vocational and general education programs respectively. They took these rates of decreased recidivism and calculated them against the cost benefit analysis framework they developed through economic assumptions for the state of Washington. Findings in these calculations showed that the marginal cost for vocational programs was \$1,182 per offender and the marginal savings to the taxpayer from lower prison and other criminal justice costs was \$6,806. Also, when looking at general education the cost per offender was \$962 while the taxpayer savings was \$5,306. When they added in the cost associated with crime victims the cost benefit rose significantly to \$13,738 for vocational programs to \$10,669 for general education (Aos, Miller & Drake, 2006). When practitioners and researchers can get policymakers to understand that offender education programs are an effective way to reduce costs associated with crime the likelihood of cutting these programs should reduce. The commitment to pay a little now to keep or increase the availability of educational programming should be pointed out with the concept of paying much more at a later time. These costs at the state and federal funding levels are significant if these programs are reduced but there is also much more in human cost if educational programs are reduced or eliminated.

When examining the main indicator for success, recidivism, the ability of researchers to establish a level playing field has been difficult. In a recent study (Pew Center on the States, 2011) found that the rate at which offenders recidivate across the country is between 43.3% and 51.8% over a period of three years from release. Additionally, two-thirds of these offenders were arrested within this period of release and may not have been incarcerated. This is an alarming trend when examining the number of offenders releasing from prison each year in that

one-half return to prison within a three year period. The study additionally found that when offenders are provided with some form of correctional education, the ability to reduce recidivism rates during this same three year period could be impacted positively by 12.9 percentage points. The researchers went even further with this reduction in the rate of return to prison and determined that eight offenders had to receive some type of educational programming to keep one additional offender from returning to prison within three years. This shows that when programming is offered, it is best to determine if it is impactful in a system against their regular rate of return.

While some states do better than others as it relates to offender educational programming, the ability to determine which type of programs produces the best results. Educational programs can be divided into different types. Davis, Bozick, Steele, Saunders and Miles (2013) in a recent meta-analysis study of correctional programming attempted to categorize programming into four categories for the purposes of determining effective outcomes. The four categories are adult basic education, high school/GED, postsecondary education and vocational education. The researchers identified the type of educational program delivered and the instructional delivery method used to teach the material to develop an odds ratio for programs with these different types of characteristics. The number of programs by category was adequate to allow for an effective analysis of the programs found to be reviewed and analyzed. The program with the best odds ratio for success was postsecondary education at .49. Second was vocational education at .64, third was adult basic education at .67 and finally high school/GED was last at .70. It should be noted that all were found to be significant at reducing rates of recidivism at the .05 level of significance. Additionally, the researchers determined that there were significant reasons for the differences in the odds ratios. Basically, offenders who are able to attend class at

a postsecondary or vocational level are usually more advanced regarding literacy and can function at much higher levels than those offenders who received basic education or who have not received their high school diploma or GED. The variation in programming determined something that was considered positive when looking at program development. The different programs served offenders with different skill sets and different needs which suggest that there is a need to place offenders in programs that meet their specific needs is a necessary consideration. The one size fits all approach was non-existent in that offenders for the most part were placed in programs that assisted in their return to the community. These findings suggested that educational programs can reduce recidivism upon release from prison regardless of the offender's ability and academic preparedness.

Davis et al. (2013) also examined the manner in which the classes were delivered. The researchers developed odds ratios in the same way as above for the various educational programs were delivered. The most prevalent manner in which classes were taught and their odds ratios were as follows: programs with post release services had an odds ratio of .43, class taught by a college teacher had a ratio of .44, whole class instruction had a ratio of .71 and finally one on one instruction had a ratio of .98. All methods were significant at the .05 level of significance with the exception of one on one instruction. The high level of success in the program with a community-based component is something that is important when establishing program curriculum. The more offenders can access services in the community, such as instructors or job placement services, the better the outcomes are relative to offender recidivism.

There have been several studies completed to show that educational programs are an effective way to reduce recidivism in the correctional population. However, due to ethical ramifications, researchers have not been able to conduct a true scientific study using random

assignment of offenders to treatment and control groups. However, with most agencies having limited resources, the ability to educate offenders with fewer slots than will meet the need, there is always a control group, although not random, who do not receive these educational services. When comparing the two populations, one can assume that it would be difficult to develop a strong cause and effect relationship to educational programs as offenders often times come into the facility with both high and low levels of education and training. Determining the population that receives the treatment versus the group that does not is a difficult task for administrators as budgets are driven by outcomes. Oftentimes, offenders who can produce more certificates will be placed in programming over a needier offender in order to ensure continued funding. This type of biased assignment of offenders to programming often times clouds the picture related to effective programming for the prison population as a whole (Gaes, 2008).

Jenson and Reed in 2006 conducted a summary of correctional education literature. They combined an analysis of specific studies with the results of prior meta-analysis and other reviews. Their paper was at some point between a summary and a review. They took the review a step further to look not only at education for offenders but classified the studies into what type of educational program the offenders completed. While many of the studies and summaries reviewed were problematic from a research standpoint, they did find trends in the data. The first type of educational program was the Adult Basic Education to receive the General Equivalency Diploma and found a positive impact on reduced recidivism. Overall, they found a positive relationship with a reduction in recidivism with these programs with most being around the 10% reduction area. Jenson and Reed also looked at vocational training and found similar results with a positive correlation to a reduction in recidivism rates. Vocational programs fared a little better with a reduction in recidivism at around the 20% range. However, findings for college programs

were much better than the other two areas studied. Participating in a college program decreased the likelihood of an offender returning to prison by close to 40%. The ability of an offender to participate in college courses shows that they have a lot more going for them in the areas of ability both academically and socially than the typical offender. These offenders are most of the time expected to move out into the workforce making significant salaries to ensure they will be able to take care of their responsibilities without having to return to criminal behavior. Overall, they found that whatever the education provided to an offender during their period of incarceration had a positive effect to assist them upon release to not return to prison (Jenson & Reed, 2006).

While the overwhelming evidence showed that correctional education is an effective way in which to decrease the number of offenders returning to prison, some researchers warned of measuring the success of a program against one variable, recidivism. Ward (2009) wrote in a recent article that a reconviction for a criminal act must be examined against other factors. The factors can be the offender's previous life history, post release family and other community connections, access to opportunities, physical or mental health and a variety of other variables that contribute to the offender's behavior upon release. Ward also pointed out that offenders who participate in educational programming through the self-selections process are generally more highly motivated than the offenders who do not volunteer. This increase in ambition to improve their situation needs to be a factor when looking at outcomes. Additionally, offenders can be positively affected by the correctional education experience only to have these positive benefits negated by their return to the same family, neighborhood, friends and associates that contributed to their antisocial criminal behavior in the first place (Ward, 2009).

Overall, the benefits of correctional education are evident in the past and recent literature. While there is the need to continue to study these benefits is obvious, there is definitely a lack of information and support for employment placement upon release. How the offenders remain out of prison and if their employment is a result of the training received needs to be expanded. As re-entry of offenders expands due to current conditions, how do we use not only the human capital we have developed at the facility but also the social capital that all of our communities offer? While we continue to provide services at the facility level, when offenders re-enter society they will definitely be put to the test to see if they can refrain from criminal activity. Without the increase in social capital at the community level, many releasing offenders will not succeed (Draine & Wolff, 2009). The support from the family and community through different levels of trust is vital to success of the offender remaining out of prison and becoming a productive member of society, our ultimate goal (Coleman, 1990).

The ability to provide educational programming using a computer-assisted method is definitely challenging in a correctional environment. The ability to use a computer-based program is considerably a more cost effective approach to instruction, especially in times with limited budgets and staff (Person, 2012). Davis et al. (2013) during their meta-analysis study also attempted to determine if the use of computer based instruction provided better results than a traditional classroom program by looking at academic improvements of offenders. While recidivism was not the independent variable, researchers surmised that with improved academic performance, the ability to reduce recidivism can be achieved through increased employment and pro-social behaviors upon release. Findings determined that the computer-assisted instruction was not statistically significantly different than the traditional face-to-face classroom instruction. While the information to conduct the study was limited to reading and mathematics implications

are that while the differences are not significantly different, the use of computer-assisted instructional methods can provide an important supplement to the overall educational programming in a correctional environment.

Davis et al. (2013) found that through their extensive meta-analytic research efforts, offenders who participated in educational programs showed reductions in recidivism that those who did not participate in programming. This decrease translates to a reduction of 13% for those offenders who participate in educational programming from those who do not. One important factor to note was the ability to classify programs into what the researchers called higher-quality studies. These studies included research that used random control groups or used a quasi-experimental design where treatment and control groups were matched at baseline on at least three characteristics other than gender. These high-quality studies showed increasingly better outcomes as the offenders who were provided educational programming were 43% less likely to return to prison than those who did not participate in this programming. This high level of improvement could have been linked to the study design as the researchers knew the program was being studied and could have had an impact on instructors and offenders. Overall, the ability to provide educational opportunities for offenders should be seen as an opportunity to have a positive impact on offender outcomes regardless of the study design.

Davis et al. (2013) also looked at educational programs and their relation to an offender's ability to locate employment upon release. When they looked at meta-analysis the studies showed that those offenders who participated in correctional education were 13% more likely to find employment than those who did not participate in programming. The data was also examined from a standpoint of what type of educational program assisted in the development of employment upon release. One would probably expect that vocational programming would have

the greatest ability to assist in finding employment upon release. This was also true in the meta-analysis. Vocational educational program participants were 28% more likely to not recidivate than those offenders who did not participate in vocational education programming. However, the researchers noted only one study met the high-quality study requirements of using a random control group or used a quasi-experimental design where treatment and control groups were matched at baseline on at least three characteristics other than gender. This study showed only minimal success based on the total data from all the studies. The costs were examined and for an educational program to break even, it should reduce recidivism rates between 1.9 and 2.6 percentage points for each program initiated. These research findings, a reduction of 13%, more than justifies the expansion and continued funding of educational programs in a correctional setting. Policy makers must understand the need to fund programs with long term goals in mind. The ability to recoup funds immediately is not possible as most studies showed a decrease over a three year period. Therefore, they must make the decision to invest up front to receive benefits that as shown by data may take years to materialize.

Researchers and policy makers indicated a need to improve the research related to education based programming in correctional settings. The available research on educational programs is found to be highly variable. Studies appear to be all over the board when it comes to methodology and the actual educational programming can be different from location to location (MaKenzie, 2008). Davis et al. (2013) also noted the differences in research methodologies relative to correctional education and programming in their meta-analysis. They indicated within their findings what would have helped them perform a better meta-analysis. The type of data they felt would be beneficial could be seen as a blueprint for correctional education program and research. First, they saw a need for applying a stronger research design. The evidence of

selection bias could be found in many studies and when offenders self-select participation in educational programming they are serious about preparing for their re-entry into the community. Next, they found another need to measure the program dosage or how intensive was the program offered. Many researchers felt that exposure to education programs in a correctional environment cannot be done successfully in a short period of time such as 20 or 30 hours. However, many of the studies reviewed did not indicate how much exposure or dosage participants received in the educational programs. Having this data available to use for the purpose of study and also for use during program development would be extremely beneficial. The next requirement for research inclusion is more information about program characteristics. This should include items such as curriculum, method of delivery, access to technology, teacher educational levels and ratio of student to teacher just to name a few. This type of information will go far when examining programs and the use of this information can assist in the ability of researchers comparing like programs. Many times programs are compared against other programs that are in no way similar but without adequate information, the ability to make like comparisons is extremely challenging. Finally, the researchers felt that there was a need to look at other factors beyond offender recidivism. Many argued that recidivism is a distal measure and can be affected by other factors besides correctional education. The research team felt that other indicators should have been more prevalent in the body of research. They suggested looking at more proximal measures that would better show an offender's ability to think and behave. These can be literacy gains, development of skills and academic progress. While the data has come a long way since the inception of examining the effectiveness of correctional education, researchers and administrators need to improve data collection processes to allow for a data set that clearly shows what is effective when working with this specific population.

Re-entry Programming Outcomes and Implications

The ability of a correctional system to release offenders due to budget constraints must be met with programming to assist offenders with their re-entry back into society. Wright and Rosky (2011) found that the state of Montana's early release program that was developed as a budget reduction strategy did not produce the savings anticipated. The state was faced with significant budget issues and with these issues came a need to release offenders from prison to save state resources that needed to be directed to other areas of state services. This type of predicament is not uncommon, and Montana is one of the few states that actually conducted an outcome review of offenders released early due to budget issues. Overall, Wright and Rosky (2011) found that offenders released early were more likely to return to prison than those who completed their time and were released on conditional release. The ability to adequately prepare for release may have been an issue but the researchers focused on the deterrence factor as to why they returned to prison at a higher rate. The implications for this study can be far-reaching when looking at moving offenders back into the community. Offenders must have the ability to adequately prepare for re-entry and many states are using what is known as re-entry programming to move offenders back into society.

When examining prisoner re-entry programs, it is important to know who will likely be a recidivist and at what point in the re-entry process. Severson, Bruns, Veeh and Lee (2011) conducted a study in a Midwestern state that provided a re-entry program for offender releasing who met certain criteria. Criteria for program participation included a high risk score on the Department's risk assessment instrument, multiple incarcerations, drug and alcohol use, inadequate education and poor employment histories. The program consisted of two phases with one focusing on assessments and programming at the correctional facility prior to release

including education programs, cognitive programs, substance abuse and mental health treatment and finally job training activities. Phase two of the program allowed for services at the community level based on the offender needs. Community supports were available based on the offender's re-entry plan and can include intensive job services, mentoring and support programs. The study examined both participants in the program and a comparison group. Looking at the demographics and other criminogenic factors, both groups appeared to be fairly consistent as it relates to a multitude of factors, including race, community risk prior convictions and other items. While the outcomes for offender recidivism were greater for those offenders who participated in the program, the return was also at a more intensive rate in reference to actual days in the community. The ability to determine why offenders who participated in the program returned to prison at higher rates could not be explained other than there were other factors than participation that led to the higher rates of recidivism. Other factors that were specific to returns to incarceration were positive drug screens, new convictions, high risk scores, criminal history and days in the community were considered the best predictors. Additionally, the most significant factor was for those offenders who tested positive on a random drug screen. These offenders with substance abuse issues were most likely to return to prison within a short period of time once released from prison. This was evident when looking at the availability of services for substance abusers in the community which was almost non-existent.

The federal government implemented incentives for states to develop re-entry programs for offenders in state facilities. This is what led to the re-emergence of treatment programs in the first decade of the twenty-first century. The program was known as the Serious and Violent Offender Re-entry Initiative (SVORI) and focused on states developing their state specific program for implementation with the violent offenders who were ready to release into society.

The program was seen as a landmark in the manner in which it focused on rehabilitation and high risk offenders. The need for focus services on this population was something that had not been done in the past as programs were primarily geared towards longer periods of incarceration. The SVORI program was seen as a somewhat scattered approach to the re-entry process for a specific group of offenders. Implementation of the individual programs varied from state to state and made it difficult to determine what part of the program could be identified as having a greater impact on recidivism. For example, one state focused on offenders housed in segregation, some focused on a specific facility, another focused on serving offenders returning to a particular area, while others focused on specific needs such as substance abuse, job training or employment placement. Outcomes were consistent with the literature that the various programs performed better than providing no services. However, without having a clear program that was consistent in every state, it was difficult to determine what programs had the most impact on recidivism and other variables related to re-entry. One thing that was certain from the various sites is the need of high risk offenders is much greater than low risk offenders when examining the development of a re-entry program (Lattimore, Steffey & Visher, 2010). Additionally, this type of implementation of services is seen as problematic when examining the needs of an offender class. Andrews (2006) found this to be problematic with appropriate intervention development when working with a correctional population. The inability to require a specific evidence-based program to be implemented with fidelity could have been used to see more positive results. Programs that were developed were not determined to be negative in nature but having some evidence based approach could have presented more favorable results.

The ability of a researcher to examine large amounts of data developed by studies over extended periods of time is known as meta-analysis. Meta-analysis is a type of research that can

be used to develop program evaluation based on what the literature shows over an extended period of time. This is especially true when examining the need for prisoner re-entry programs. When looking at outcomes of these programs most studies are concerned with one primary dependent variable and that is recidivism. As Petersilia (2009) indicates, studies in the arena of re-entry are designed to measure what is called the revolving door of re-entry. Meaning that all studies are primarily concerned with whether an offender returns to incarceration once released. Additionally, Petersilia found that many studies in this field were completed with a lack of scientific rigor in that few used experimental designs.

The ability to conduct a meta-analysis was completed by Wright, Zhang, Farabee and Braatz (2013) when they examined re-entry programs from the years 2000-2010. Wright et al. (2013) looked at thirty-five different studies covering twenty-nine different programs over this period of time and found that only five employed a random assignment of offenders. Most used a quasi-experimental design with offenders receiving some type of treatment and then compared to other offenders who received no or some other type of treatment. Again, programs used various types of interventions with the most using substance abuse as the primary intervention. Additional interventions included individual or group counseling, life skill classes, cognitive behavioral treatment, employment services, aftercare, residential treatment and educational services. All programs used a variety of interventions with all using one or more of the components listed. When looking at the outcomes of the twenty-nine programs, six reported mixed results depending on what components were available in the program. The twenty-three programs that reported statistically significant results, the most common features found in the programs were life skills and substance abuse programming. The best results were shown in programs that offered a combination of aftercare, substance abuse prevention, education and

residential treatment. These services were found to be present in thirteen of the studies that showed statistical significance. One item to note which the authors found to be interesting was the effect of cognitive based treatment interventions to be the least significant in the programs reviewed that provided this service. This was provided given the support and previous research on the effectiveness of cognitive behavioral treatment that focus on the dysfunctional thought process of the offenders (Landenberger & Lipsey, 2005). This could have been attributed to the manner in which the treatment was provided and to what level the study actually viewed what constituted cognitive behavioral treatment. The meta-analysis further makes the point that without a clear program that is guided in how it is delivered in content, it is difficult to determine what parts or combination of parts of the program produced the positive results.

Recommendations were made regarding program development and a consistency with program delivery at the correctional institution level.

In comparison, a meta-analysis of educational programs was conducted ten years previously by Wilson, Gallagher and MacKenzie (2000) and similar results were found. This meta-analysis used much of the same methodology and has similar findings. The researchers looked at thirty-three studies reporting fifty-three program-comparison contrasts. Comparisons were made with offenders who received some type of educational programming and those that did not receive any programming were used as the control group. The largest number of studies examined the provision of vocational training and this was found to have the largest impact on recidivism. This was followed by adult basic education and postsecondary education which both also impacted recidivism in a positive manner. Finally, the study looked at offenders who participated in correctional industries and did not find a direct relation to participation in the program and reduced recidivism rates. The researchers also found the need to examine not only

program components but also what occurred with the offender upon release into the community. They specifically examined the relation of employment to the rate of recidivism and found something interesting at it relates to program outcomes. The ability to determine effectiveness of programming was weighed against program participants employment status upon release. This comparison was done across all offenders who participated in the educational programs and it was found that magnitude of the employment effect accounted for a large portion of the recidivism effect. Therefore, the ability to determine program effectiveness was impacted greatly by the ability of the offender to locate employment upon release. The programs that assisted or were able to assist the offender in locating employment also impacted recidivism rates in a positive manner. The impact of employment accounted for a 38% recidivism reduction as compared to a 39% reduction for program participants. This was somewhat expected as lack of employment and the commission of criminal behavior are highly correlated.

Re-entry programs can focus on many needs of offenders but many feel that programs that focus on jobs could be what keep them from reoffending. The ability to get offenders employment can be a challenge, especially when examining what type of training the offender received and job availability, including hourly wage. In Kings County New York, it was found that when participants were provided with effective case management and counseling programs, their ability to locate employment was increased. One important item to note in this study was that those offenders that completed the re-entry program were not only able to find employment quicker but were also able to remain out of prison for a period of two years at a greater rate than those offenders who did not complete the program. The key to success was the offenders had to actually complete all phases of the program for maximum effectiveness (Jacobs & Western, 2007).

A study in the city of New York was completed studying the release of offenders from prison to this urban area. The study examined the work done by the Center for Employment Opportunities (CEO). The CEO provides transitional jobs for offenders returning to the city and allows for them to be paid daily. All offenders have an opportunity to participate if they wish, but it is voluntary. The program pays minimum wage and provides for supervision and daily feedback to offenders and their parole officers. Once it is felt the offender is ready to work in the job market, they are deemed to be job ready and assisted in finding some type of permanent employment. However, the CEO provides the offender with support and assistance for up to one year upon placement in a permanent job. The outcomes for this study are what to be expected. The program participants were much more likely to receive employment services than that of the control group. The impact of employment and earning was found to be increased for the program participants. Twenty-six percent of the participants were employed as compared to twenty-six percent of the control group as noted in the first quarter of the study. However, the ability to track this long term was somewhat compromised as by the fourth quarter the difference between groups was no longer significant. Finally, the program showed significant results as it relates to the rate of recidivism. The program participants were less likely to be arrested for a crime, to be admitted to a state prison for a new conviction and to be incarcerated for any reason in prison or jail. There is also one important item to note in this study is that when participants engaged in the program within three months from release, CEO produced large decreases in recidivism measures. Findings also showed that if the participants waited for three months prior to enrollment, there was no difference in recidivism rates than if they did not participate in the program. The key to success relative to reducing recidivism was to get the offender into the program early and provide necessary supports and services to assist with locating permanent

employment (Redcross, Bloom, Azurdia, Zweig & Pindus, 2009). Another study looked at the effectiveness of transitional jobs in the cities of Chicago, Detroit, Milwaukee and St. Paul. These cities received funding to begin a transitional work program and a job placement program. The two programs were compared with the focus being getting offenders to a level of employment where they are no longer dependent on the program for assistance. One key difference in the transitional work group was that when offenders found permanent employment and were no longer in need of assistance, they continued to receive what was referred to as bonus payments as an incentive to stay employed. While outcomes showed higher level of employment and for longer periods of time in the transitional job program, it was believed that the ability to provide bonus payments to participants is what led to the ability to retain employment in lower paying jobs due to the weak economy. However, when the study looked at recidivism it showed only the St. Paul site to have a significant difference in recidivism between the two groups. This may have been due to the ability of the St. Paul probation department to provide an intensive form of supervision to the program participants. Based on information received, the ability of an offender to not be returned to jail may be lessened by their employment status. Therefore, those offenders that were employed were not returned to prison at the same rates as the group that had fewer offenders employed. However, the other three sites showed no significant difference in the two groups related to recidivism. These findings represent the dilemma that the correlation between employment and recidivism may be much more complex than previously known (Redcross, Bloom, Jacobs, Manno, Muller-Ravett, Seefeldt, Yahner, Young, & Zweig, 2010)

Based on the need for offenders to find some type of employment upon release, regardless if it is part of a re-entry program, we must look at ways in which we can improve the

effectiveness of re-entry programs that target employment. In a recently published policy essay, Latessa (2012) indicated the need for re-entry programs that just want to help offenders and those that actually want to reduce the level of recidivism. He indicated to not only have the ability to provide the assistance of job placement and a place to reside, but also the need to address criminogenic risk factors. These factors must be identified using an assessment tool that is found to be valid and reliable. The information presented by this instrument should be addressed through offender specific behavioral rehearsal techniques. Latessa indicated that offenders must be trained to be able to identify and anticipate problematic situations that they may have to face in the community once released. The program should focus on pro-social responses to these difficult scenarios. Offenders know what to expect when they are released from prison, many back to their same environment. They must also have a keen understanding of how to react when they are presented with problems or issues. This type of cognitive structuring of behaviors has a direct impact on the key variable we measure correctional programs against, recidivism. The body of research clearly shows that a well implemented correctional program that targets the correct offender must address specific criminogenic needs and actually teaches offenders new skills and behaviors can have a direct impact on recidivism. This is true when looking at re-entry programs as well as the program can offer a wide range of supports for offenders as they move into the community, but if it does not positively impact recidivism rates of those offenders who participated, the ability to call the program a success will not be an option. This in turn jeopardized the availability of funding and other types of support for program continuation.

While much of the data presented and demonstrated over the last several years regarding re-entry programs is limited at best, Bushway and Apel (2012) completed a comprehensive

review of the data available and found that there may be a process whereby policy makers can identify those offenders who have made the decision to desist from criminal behavior once released. While there are specific factors identified in the research, Bushway and Apel found that with factors such as voluntary enrollment, active participation and successful completion of prison and community based programs, make for offenders who are excellent candidates for desistance signals. This was also evident in the Redcross et al. (2010) project that clearly showed participants that were actively engaged in the program within three months of release did much better relative to recidivism rates. The signaling model developed actually uses the data that offenders with criminal histories sort themselves into different institutional arrangements and recidivism likelihood. This is evident in both correctional facilities and in community programs as those offenders who truly engage in the program are those that are more likely to desist from criminal activity. The position of the article is interesting in that it takes an opposite view from the traditional approach to correctional programming and outcomes. The data reveals that when examining programming, the program provided may not be the actual cause of desistance but can be found to be somewhat helpful in providing assistance to offenders during the transition process back to the community. Instead, the authors felt that the program should be used with the desistance signaling providing a guide as to what offenders would most benefit from program participation. Having the ability to self-select participants is not always a luxury when implementing a program for offenders, but it is helpful when a practitioner can identify those offenders who are serious about getting out of prison and staying free of criminal behavior. Resources can be targeted to these individuals with a framework of understanding that they will be successful if provided with the correct supports.

Additionally, when looking at re-entry programming, family ties can play an important role in the reduction of recidivism of releasing offenders. One specific study of note is that when Bales and Mears (2008) examined the variable of offender visitation; they found that offender visitation did have a direct impact on reducing offender recidivism. Now that we know that the family connection is key to reducing recidivism, we must be able to use this information to support offender re-entry. Berg and Huebner (2011) examined the need for family or social ties at the community level and if it has an impact on the ability to assist with keeping offenders out of prison. They looked at 401 males who were released from a Midwestern state prison and followed them for a period of four years while on parole to determine if they were returned to prison for parole violations or for a new offense. Data showed the importance of social ties, mainly family, did have an impact on recidivism. First, those offenders who were employed once released and had quality familial ties were far less likely to recidivate. This was evident and more prevalent when the family member was a spouse or considered as a significant other. The researchers determined this could have been linked to the fact that the offender was in an established relationship with appropriate supports to assist with the re-entry process. Second, offenders with quality ties to family were also more likely to be employed upon release and in the follow-up period than those that had limited or no community ties. Finally, the data provided that if the offender had a period of unemployment prior to incarceration, they would also have a high degree of unemployment upon release. What was interesting to note from this perspective is the fact that this effect of unemployment was moderated by quality family ties when examining the recidivism rates. These findings relative to family ties are significant when looking at just family ties upon release. However, attempting to make the argument that family ties may be the sole reason for offender success cannot be done when the variable of

employment is introduced. This can be attributed to past research that indicates family ties and social support motivate offenders to find employment and immerse themselves in other types of pro-social life activities. As correctional professionals, the ability to support family ties can be seen as a positive aspect of what we can do to facilitate successful outcomes for releasing offenders.

Most practitioners look at their specific programs and feel that they are effective at reducing the number of offenders who actually come back into the system. However, when one looks at the body of literature, there are certain programs that stand out as most effective. When you look at these programs in the literature, it does not take a lot of convincing to show individuals that these types of common sense interventions can work and be effective in the long term. One of the main factors found in recent history to assist offenders in staying out of prison upon release was that they find and maintain a legitimate job after release (Uggen, 2000). The job they find must be one that is not seen as a job but seen as a career. This entails the ability of the offender to have skills necessary to be employed in technical arenas that pay a significant wage. Offenders cannot be released and placed in a low wage, low skill position and be expected to meet all the standards of parole including having a residence, paying fees, taking care of a family and many other conditions (Bernstein & Houston, 2005). The state of Illinois looked at a sample of offenders released relative to their view on employment. When offenders were sampled prior to release many felt that their ability to locate and keep employment would not be an issue. While over half of the offenders surveyed felt that it would be easy in locating employment upon release, a follow-up survey of the same population indicated that less than one fifth of the offenders actually had an easy time finding employment. Those offenders who easily located jobs generally had previous work experience with specific employers or had specific

skills that were in demand in the employment sector. Additional findings showed that of those offenders actually employed, 65% were not satisfied with their salary, as the average hourly wage was \$9 per hour. While the study did not look at recidivism, it clearly showed that the offenders who released to a stable employment situation had a significantly higher satisfaction rate with their jobs. This higher satisfaction rate showed they remained employed for longer periods and continued to move through the company to higher paying jobs (Kachnowski, 2005).

The state of Florida recently undertook a complete review of offenders participating in the adult basic education (ABE) programs and how well they do relative to three different variables. These variables were employment rates, employment earnings and recidivism rates. The researchers had an extremely large group of offenders to examine in the 5,172 offenders who participated in educational program and were reviewed against 7,666 offenders who did not participate. The ability of such a large group was advantageous for various reasons, mainly being able to account for demographic factors as well as other items that have direct relations to higher rates of offender recidivism such as number of times incarcerated and if they had been convicted of violent crimes. When the researchers were able to develop sub-groups within the data, the ability to see significant differences in program participants relative to their ability to locate employment and also how much they earned upon release. Without the ability to develop these sub-groups no type of difference could be found between the two groups related to these factors. However, there was no evidence in the analysis that documented any type of impact on recidivism. This was surprising given the direct impact of recidivism on employment that has been found in previous studies (Uggen & Thompson, 2003). The researchers did find some interesting correlations as they relate to increased outcomes for minorities in both employment rates and earnings upon release. Also, the ability of the offender to participate in the educational

programming in one facility all at one time also had a positive impact on the offender's ability to locate employment and make a higher wage. Overall, the study did show positive benefits of the educational programming and felt that while the data did not show a reduction in recidivism, the expenditures did have a positive cost benefit as the released offenders were able to make more money in the job market (Cho & Tyler, 2013).

The state of Vermont obtained a grant to increase their ability to provide offenders with a positive workforce development experience. Program development focused on education and work place training for offenders while incarcerated. The program was strongly rooted in the positives of offender population and what the facility physical plant could provide as it relates to education and work opportunities. The program recognized the importance of assisting and providing the offenders with soft skills training in addition to providing them the skills necessary to do a certain skilled job. The soft skills training was felt to be one of the most important aspects of the program as many of the staff had a difficult time engaging offenders in the program in order to get them to take the training seriously. Offenders were less than eager to come to work or class and did not get along well with co-workers or even supervisors. Classes were started to begin the process of bolstering offender's skills of how to keep a job with the focus being on employment factors not necessarily related to performance but that did relate to employment satisfaction for both the offender and the employer. Vermont officials were fortunate that the grant allowed for both an experimental group and a control group. Findings in the study indicated that 91% of men in the experimental group obtained employment upon return to the community versus sixty-four percent of the control group. Also, when looking six months after obtaining employment, 95% of the men who obtained employment in the experimental group were still employed as compared to 64% of the control group. Additionally, recidivism

rates for these offenders indicated a significant decrease for both males and females. Males in the experimental group experienced a 20% decrease in re-incarceration and females in the experimental group showed a 37% reduction in recidivism. Basically, offenders with some type of job training with the important variable of teaching them necessary job retention soft skills have much better outcomes than those offenders who have no job training (Houston, 2009). The data of the program does show a positive benefit relative to maintaining employment upon release, and it would be interesting to also show if the offenders are working in the area they were trained or are they employed in a different field altogether. Are they using the technical skills learned in the facility in their current employment situation? Also, while six months is a good period of time to measure effectiveness, it will be very interesting to see if the benefits continue over more significant periods of time.

Significant issues were found when trying to examine studies related to offender re-entry programs and determining what studies were found to be effective in reducing recidivism. One such phenomenon that was discussed was what Gerber and Malhotra (2008) referred to as publication bias. They found publication bias to be especially prevalent in the field of social sciences as many researchers may find one intervention in their study to be significant but fail to report on what was found not be significant. Additionally, some studies never make it to publication as researchers do not want to publish data that shows no type of impact or even a negative impact on what is being studied. This type of publication bias can be difficult to label programs as effective or what is seen as best practice due to the inability of ruling out what works within specific programs.

Wright et al. (2013) also found problems associated with re-entry programming evaluation in their review of the research over the last ten years. The first item noted was the

lack of studies with a strong methodological rigor. Random assignment was not found in 86% of the studies, while quasi-experimental design was seen as the dominant method used in the research. The research team expressed the need for a much more thorough research process that used quality methods and discusses items such as attrition, matching participants, measuring prior criminal activity, using multiple outcome measures, ensuring sample sizes with sufficient statistical power and having a sufficient time frame to measure outcomes to name a few. Strong methodologies can be the start to better research but it was also mentioned the need to have an evaluation design. A strong evaluation design can assist in determining which programs are considered to be effective and which are not. Finally, the researchers noted the need to have studies that are specific to program implementation of the components and during implementation of the components. The lack of specificity in program descriptions may have led to the researcher not being able to identify some programs that would have been necessary to have in the evaluation. Mention was also made of publication bias and how it fits into the lack of all information necessary for a proper evaluation. Some studies did not get reviewed due to the fact that they were not published or fell victim to the file drawer effect. Studies not showing significant results are rarely presented to journals for publication and if presented, rarely get published. Finally, the researchers indicated a need to have a formal meta-analysis of all re-entry programs. They did indicate that due to the variations in studies examined, this can be a difficult task but it needs to be attempted to get a better picture of what type of programming is most effective when working with offenders returning back to their communities. Methodological issues were also found in the meta-analysis completed by Wilson et al. (2000). They also noted issues with the self-selection process as there were no studies that used a true experimental design. Based on the comments of both research teams, who completed the analysis ten years

apart looking at studies over a thirty year period, there still appears to be a need to work with correctional researchers to ensure a more effective manner in which to complete research with correctional populations.

Conceptual Framework

The ability to construct a quality conceptual framework for effective correctional programming based on the data gathered can be challenging due to the methods in which many of the studies were conducted. Also, specific theory related to the reduction of offender recidivism is not clearly defined but is located in a large body of conceptual interventions. However, based on the above review, there is a common thread to what is most effective in the reduction of offender recidivism. The framework of an effective intervention needs to be built around the following assumptions:

- Offenders need to be evaluated for not only risk of re-offending but also their treatment needs. Placing an offender into a program that does not fit their risk and need level may be more harmful than helpful to the offender.
- The program needs to be completed by allowing the offender to move at their own pace to ensure they understand and can implement what is being taught. Many times offenders are under educated and need more assistance to fully comprehend the material that is delivered.
- The environment in which the program is delivered must be as less stressful as possible to allow for the offender to concentrate on what is being presented.
- The instructor should teach in such a way as to include offender participation and input as much as possible during the delivery of the information. The ability to guide the class as though the offender has never been presented with this material before can be challenging

for any instructor. This process can be a slow and tedious one, but the focus should be on quality of offender programming and not quantity.

- Cognitive training exercises should be initiated to allow for offenders to process information. The offenders need to be allowed to see their world in a different manner than they have in the past. Having the ability to role-play or practice certain techniques is effective in changing their thought process.
- Vocational training can play an effective role in preparing an offender to return to society and provide for a job that provides a reasonable salary.
- Pre-release classes should address the needs of the offender as they get prepared to return back to the community. The needs can vary from offender to offender, but having an individualized program is more helpful than putting all offenders through the same interventions.
- Re-entry programming is necessary at the community level upon release to assist all offenders with their need areas such as employment, housing and substance abuse or mental health treatment.

Summary

This review of literature was completed by examining offender participation in educational programming and re-entry programming. While these two topics are interesting to examine from a historical perspective, it is important to add the need to know the basis for human learning and instruction. This was included to set the framework for how and why some of the results for program effectiveness could be found. While the research for the most part indicates that providing educational and re-entry services does have a positive impact on recidivism rates, the ability to indicate which programs are most effective is lacking.

Researchers are struggling with using strong methodologies to be able to indicate the most effective programs by using strong scientific models with offenders in correctional settings. These offenders have certain rights to programs and cannot be denied programming relative to random assignment to a control group. Additionally, it is necessary that incarcerated individuals volunteer for research programs when the research is done in the facility, but this also lends to a self-selection process as those motivated to learn or better themselves will self-select in both or whatever groups are established. These barriers should not be seen as problematic but as challenges we as researchers must continue to work through in order to increase the methodological rigor relative to determining quality outcomes for this population. Resources for this population are determined to be scarce and any funds spent must be tracked and measured using the best approach possible.

CHAPTER 3: METHODOLOGY

Introduction

Methodology for data collection and data analysis will be explained in the chapter. The validity and reliability of the data collection including any limitations will also be examined. Two different intervention treatment types will be described and the interaction of the dependent and independent variable will be discussed in detail. The coding of the data will be described as well as the rationale for the coding in order to examine relationships between variables as stated in the objectives. The chapter will also describe the manner in which the data were analyzed and will offer a justification for the statistical methods that are ultimately adopted for the study.

Population and Sample

The target population of the study is defined as offenders who were released from the custody of the Department of Public Safety and Corrections in the state of Louisiana during the year 2010. The total number of offenders released to the community in this year was 13,681. The accessible population of the study is the offenders contained in the Department's data-system (CAJUN) which was made available to the researcher for collection and review. The accessible population was adult offenders over the age of 18 who fell into one of three categories. For the purpose of the study the first category of releasing offenders had completed some form of vocational education through the Louisiana Technical College system. The second category was releasing offenders who had completed the Department's 100 hour pre-release program. The third category of releasing offenders (the control group in the study) was identified as those offenders who had been released during the study period but did not receive the vocational education program or participated in the Department's 100 hour pre-release

program. Due to the specifics of the sample population, this study was submitted for approval to the University's Institutional Review Board (IRB) and was fully approved (see Appendix A).

The data set contained a population of offenders numbering 13,681 who were released from prison during the year 2010. However, upon inspection of the data, 49 of these offenders had participated in both the vocational education program and also completed the 100 hour pre-release program. Due to this small number of offenders completing both programs, analysis would not have been a viable option; therefore these offenders were removed from the study. This left a total population size of 13,632 offenders for the purpose of this study. The data set contained the following totals as related to the three categories of releasing offenders. The total number of offenders who did not participate in any form of programming was 12,364. The total number of offenders who completed the vocational education program was 864 and the total number of offenders who completed the re-entry program was 404.

The population was examined and due to the disproportionate numbers of offenders receiving the two types of programming, it was felt that representative numbers of these individuals should be included in their respective samples. The first subset to drive sample size decisions was all 404 offenders who had completed the 100 hour pre-release program. Due to the number of offenders in this category it was determined that all of them would be included in the study. The next group examined was the offenders who completed the vocational education program. This sub-population total was 864 and it was felt necessary to ensure that the sample from this subset should equal that of the 100 hour pre-release offenders. Therefore, a random sample of 404 offenders from the vocational education program group was computer generated from the data base. Finally, while the control group sub-population of 12,364 was large it was felt necessary to ensure that it be equally represented. Therefore, a random sample of 808

offenders was computer generated from this sub-population. This sampling design allows for proportionate numbers of offenders who received some type of treatment (either vocational education or 100 hour pre-release programming and those that who did not receive any programming) to be included, while ensuring adequate representation from the smallest group, the 100 hour pre-release group. The final sub-population sample sizes are as follows:

100 hour pre-release Offender Group:	404
Vocational Education Offender Group:	404
Control Offender Group:	808
Total:	1,616

The data items of interest to the study was copied from the CAJUN data set and entered into an Excel spread sheet. These items include offender identification, age, race, gender, marital status and highest grade of education completed.

- Age was defined as how old the offender was at the time the data was pulled on December 31, 2013. The offender's date of birth could not be provided. Therefore, the actual age in years was used.
- Race was reported by actual race that offenders reported upon entry into the correctional system, namely White, African-American and Hispanic.
- Gender was identified as being male or female. The small recent influx of transgender offenders resulted in offenders being identified as male or female by their physical attributes.
- Marital Status was self-reported by offenders upon entry into the correctional system. The categories available for reporting purposes were single, married, divorced and widowed.

- Highest Grade Completed was self-reported upon entry into the correctional system. The ability to capture this data in specific grade levels was easily accomplished, but those offenders who had completed some level of college courses were only classified as some college completed.

Program Intervention

This study had two main programs that were examined in relation to how they impact recidivism in the correctional population. The first program was Vocational Education which is an organized program managed by the Louisiana Technical College. Courses vary in length but only offenders who completed the course and received a certificate were examined in the study. Vocational Education provides offenders with the technical skills necessary to perform a specific job. These programs are task oriented and provide for the offender to be able to use these skills to secure employment upon release. Courses for inclusion in the Vocational Education program include the following:

- a) Automotive Technology
- b) Barber
- c) Carpentry
- d) Computer Technology
- e) Diesel Power Equipment
- f) Heating and Air Conditioning
- g) Horticulture
- h) Masonry
- i) Outdoor Power Technology
- j) Pipe Fitting

- k) Plumbing
- l) Upholstery
- m) Welding

The second program intervention in the study was an education program provided by staff of the Department, who are not certified instructors, on ten specific modules concerning re-entry back into society totaling 100 hours of instruction. The 100 hour re-entry program focuses on soft skills that the offenders can use to help them remain out of prison. These soft skills provide offenders with tools they will need when faced with specific situations when they are returned to the community. The ten modules include:

- a) Personal Development
- b) Problem Solving and Decision Making
- c) Anger Management
- d) Values Clarification, Goal Setting and Goal Achieving
- e) Victim Awareness and Restitution
- f) Employment Skills
- g) Job Placement Assistance
- h) Money Management Skills
- i) Re-entry Support Resources
- j) Counseling on Individual Community Re-entry Concerns

Data Types

Data types targeted for analysis to determine the predictors of recidivism of this population included data known to either assist or hamper the ability of an individual to succeed once released from prison. These data types include demographic factors associated with

offenders releasing from various correctional facilities throughout the state and the risk factors associated with recidivating. These risk factors were measured against the ability to complete either a vocational education program or the Department's 100 hour re-entry treatment program.

Actual Data Provided

The data provided for the study were obtained from the Department of Public Safety and Corrections (DPS&C) in the form of a data file from the Department used data base, Corrections Adult Justice Uniform Network (CAJUN). A formal request was made by the researcher for this information. The data set provided did not include any type of identifying information, only the program participation and select demographic information. Therefore, there was no way in which an individual offender's identity could be compromised since an individual offender's data could not be attached to the data provided for offenders.

The data set provided consisted of the following information pulled from the Department's (CAJUN) data system and included the following for those offenders released in 2010:

- a. Demographic information pertaining to the offender's age, race, gender, marital status and highest level of education.
- b. Release information indicating the date when the offender was released from the DPS&C custody.
- c. Program information relating to the offender's completion of vocational education or the 100 hour pre-release programming.
- d. Information on offenders who completed no programming at all during the instant incarceration.

- e. Recidivism information relating to the offender's return to incarceration since the release date in 2010 until December 31, 2013.

In order to understand the information and get a clear idea of what data was provided and how to interpret the data, multiple trips were taken to the DPS&C Office of Information Services to discuss that data, to receive clarification as needed, and ensure a complete understanding of what the data represented. Also, any incomplete data on an offender was inspected for errors and to either complete the data set or eliminate the offender from the study.

Methods of Data Analysis

This study involved a multiple process for data analysis as this is being treated as a causal comparative study. The first stage consisted of data analysis that describes the population. This analysis provides specific profiles for the offender populations in each of the three types of offender samples being studied. This analysis provides a snapshot of what demographic factors are consistent in each sub-population of offenders. The ability to accurately describe each group of offenders is important for determining any significant variances between groups. These differences will also be noted relative to those offenders who were considered to be recidivist in the reporting of demographic data specific to this population. At the second stage of data analysis, the ability to examine relationships between recidivism and the program interventions variables regarding receiving treatment or not receiving any treatment prior to release is an important consideration (Hair, Black, Babin, Anderson & Tatham, 2006). When comparing the relationship variables relative to recidivism and the three treatment levels this data is also considered to be nominal-level data, the chi-square test is the used to describe associations with recidivism in the total sample population (Hinkle, Wiersma & Jurs, 2003). Additionally, in order to examine correlations between variables and a combination of variables a multiple regression

analysis will be administered (Tabachnick & Fidell, 2001). This type of analysis will allow for probabilities of these dependent variables as predictors relative to an increase or decrease in offender recidivism. This will also be utilized to examine not only what are the prevalent predictors but also if there is any combination of predictors that best predicts offender recidivism. Through the use of the statistical methods above, the ability to obtain a clear picture of what programs are associated most with offender recidivism and also what are the demographic factors associated with recidivism will be established.

Limitations of the Research

One of the main issues associated with an ex post facto research study is that the ability to conduct a true experimental design is not available. The research is done with archival data without any type of variable manipulation conducted by the researcher. Without having specific knowledge about the intention of the initial data collection, it could be assumed that the data was entered to determine program effectiveness among program participants. The data obtained for this study were from an archival data base and this is not something that is new to this type of research. The literature clearly uses archival data to determine program effectiveness as the use of the true experimental model with offenders is something that is not an ethically acceptable practice. Additionally, data entry may be an issue with using archival data. The ability to conduct analysis concerning the correctness of the data is non-existent due to the nature in which the data is received. The data must be treated as correct on the assumption that there may have been some data entry errors by those individuals entering the information into the data base. Hopefully, these errors are minimal and can be accounted for through the use of appropriate sample sizes and statistical testing.

There are also limitations associated with the use of recidivism as an outcome measure. According to Snyder and Sickmond (2006) the ability to capture offender recidivism underestimates offender re-offense rates. Only offenses that are brought to the attention of the system are actually used in many research studies. This is also the case in this study, as only offenders who actually re-incarcerated in the state prison system are counted as recidivist. Therefore, offenders could have been arrested and held in a parish facility and not be counted as a recidivist if they were not convicted of a new felony offense and resentenced to state DOC time.

Additional issues can be found with participant mortality. Offenders who have died or who have moved from the state would not have been identifiable in the data set provided. There may have been offenders who have passed away and made it into the sample selected. These individuals will be counted as non-recidivists or a success as it relates to not returning to prison. Additionally, the same can be said for offenders who have moved from the state. These offenders could be incarcerated in another state and this information will not be available in the data set provided.

CHAPTER 4: FINDINGS

Introduction

This study was designed to compare the recidivism rates of adult offenders who were provided two interventions, vocational education and 100 hour pre-release program, against each other and also a control group that was not provided any type of intervention. The other areas of interest are relative to a prediction of re-offending based on specific demographic factors. These factors include age, race, gender, marital status and education level. Associations among these factors are also examined for any type of predictive models as it relates to recidivism or returning to a prison setting.

This chapter presents the results of the data analysis conducted in the research study. The data analysis is organized by the objectives listed in the study presented in Chapter 1. First, the entire sample was analyzed by demographic factors such as age, race, gender, marital status and educational level. The same factors were examined as related to those offenders who have recidivated during the time period of the study. This descriptive information is used to identify demographic factors of each group and also the demographic factors of those offenders who have recidivated. The ability to adequately examine these factors by group and what differences in these groups are discovered. The next test conducted is the chi-square test to indicate any type of significant rate of recidivism reduction found in the population examined when compared by the 100 hour pre-release, vocational education and the control groups. The ability to make a determination of effectiveness of an intervention is completed to determine if the outcomes were driven by the interventions or were these outcomes completed by chance alone. Finally, a linear regression analysis is conducted to determine if the demographic factors of age, race, gender,

marital status and education level increase the likelihood of re-offendering in the population studied.

Description of Sample Characteristics

The population under analysis is composed of 1,517 males and 99 females (total N=1,616) who participated in vocational education, the 100 hour pre-release program or participated in no programming at all (control group). The methodology of how this sample was chosen was previously discussed but based on the data analysis, the sample population is large enough to complete necessary analysis. The descriptive findings of this population are described in Tables 1- 8 below.

Objective 1. Describe the sampled offenders who released from prison in 2010 from the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 1 describes the demographic factors for the entire sample of offenders used in the study. Most of the offenders examined were male at 1517 of the 1616 subjects studied or 93.9%. Females only accounted for 6.1% of the total population studied. Race is also another factor examined closely. The majority of offenders reported are African-American, eight other offenders reported to be of another race. Seven offenders reported as being Hispanic and one reported as Native American. The inability to adequately account for these low levels of reported race in Hispanic and Native American resulted in combining these eight offenders with

the African-American offenders creating only two racial categories, non-white and white. This gives us the ability to adequately examine any effects on this population by including them into the large number of African American offenders. Non-white offenders accounted for 1016 offenders or 62.9%. The number of white offenders is 600 offenders or 37.1%. Marital status is documented as married or single as reported in the data. While some offenders may be divorced or widowed, the ability to capture this information was not in the data set so having only two categories allowed for the accommodation of all offenders studied. Single offenders totaled 1404 or 86.9% and married offenders totaled 212 or 13.1% of the 1616 offenders reported as being married. The completed education level of offenders had to be categorized into six different levels and the cleanest manner in which to categorize was the following: no high school attended, grade 9, grade 10, grade 11, grade 12 and some college. This allowed for offenders to be placed in categories with other offenders that have completed similar educational levels. The offenders by education level is those completing no high school is 190 or 11.8%, 9th grade completed represents 200 offenders or 12.3%, 10th grade completed represents 206 offenders or 12.8%, 11th grade completed represents 245 offenders or 15.1%, completed 12th grade represents 648 or 40.1% and finally those offenders with some college courses represents 127 or 7.9%. The final demographic factor is offender's age. Offender's age is reported at the time of the study is factored as their age on December 31, 2013. The youngest offender has an age of 21 with the oldest offender in the study at age 73. The mean age of the entire population is 39 with a standard deviation of 10.81. Offenders that were categorized as 21 to 30 accounted for 390 offenders or 24.1%, 31 to 40 accounted for 497 offenders or 30.8%, 41-50 accounted for 403 offenders or 24.9% and those offenders over 50 accounted for 326 or 20.2%.

Table 1 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the Entire Sample (1616)

Characteristic	n	Percent
Gender		
Male	1517	93.9
Female	99	6.1
Total	1616	100.00
Race		
Non-White	1016	62.9
White	600	37.1
Total	1616	100.00
Marital Status		
Married	212	13.1
Single	1404	86.9
Total	1616	100.00
Education Level		
No High School Attended	190	11.8
Grade 9	200	12.3
Grade 10	206	12.8
Grade 11	245	15.1
Grade 12	648	40.1
Some College	127	7.9
Total	1616	100.00
Age		
21 to 30	390	24.1
31 to 40	497	30.8
41 to 50	403	24.9
Over 50	326	20.2
Total	1616	100.00

Objective 2. Describe the offenders who completed the 100 hour pre-release program while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 2 below examined the offenders who actually participated in the 100 hour pre-release program that is offered by the Department of Corrections. During the year of release in question, only three females had completed the course compared to 401 male offenders. This indicates a 99.3% male population and a .7% of females in the population. The race of the offenders is 272 or 67.3% non-white and 132 or 32.7% white. Married is reported as 59 or 14.6% married and 345 or 85.4% being single. Offender education levels are found to be 54 or 13.4% with no high school attended, 59 or 14.6% completing the 9th grade, 47 or 11.6% completing the 10th grade, 75 or 18.6% completing the 11th grade, 145 or 35.9% completing the 12th grade and 24 or 5.9% completing some level of college courses. The age of offenders is reported with the mean age 41 with a standard deviation of 121.42. The breakdown of offender ages is 78 or 19.4% between 21 to 30, 123 or 30.4% between ages 31 to 40, 102 or 25.2% being between ages 41 to 50, and 101 or 25.0% over age 50.

Table 2 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the 100 hour Pre-Release Group (404)

Characteristic	n	Percent
Gender		
Male	401	99.3
Female	3	.7
Total	404	100.00
Race		
Non-White	272	67.3
White	132	32.7
Total	404	100.00
Marital Status		
Married	59	14.6
Single	345	85.4
Total	404	100.00
Education Level		
No High School Attended	54	13.4
Grade 9	59	14.6
Grade 10	47	11.6
Grade 11	75	18.6

(Table 2 Continued)

Characteristic	n	Percent
Grade 12	145	35.9
Some College	24	5.9
Total	404	100.00
Age		
21 to 30	78	19.4
31 to 40	123	30.4
41 to 50	102	25.2
Over 50	101	25.0
Total	404	100.00

Objective 3. Describe the offenders who completed vocational education while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 3 describes the characteristics of the sample of offenders that completed the vocational educational programming. The gender of offenders completing vocational programming is 371 males or 91.8% and 33 females 8.2%. The race of offenders is 227 non-white which makes up 56.2% of the sample compared to 177 or 43.8% white. The educational level of the offenders is 34 or 8.4% completed no high school, 30 or 7.4% completed the 9th grade, 33 or 8.2% completed the 10th grade, 42 or 10.4% completed the 11th grade, 224 or 55.4% completed high school and 41 or 10.2% completed some college level courses. Additionally, the mean age of offenders is found to be 38 with a standard deviation of 101.84. Offenders age 21 to 30 comprised 84 or 20.8% of the population, 31 to 40 comprised 166 or 41.1%, 41 to 50 comprised 90 or 22.3% and finally 64 or 15.8% were over the age of 50.

Table 3 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the Vocational Education Sample (404)

Characteristic	n	Percent
Gender		
Male	371	91.8
Female	33	8.2
Total	404	100.00
Race		
Non-White	227	56.2
White	177	43.8
Total	404	100.00
Marital Status		
Married	48	11.9
Single	356	88.1
Total	404	100.00
Education Level		
No High School Attended	34	8.4
Grade 9	30	7.4
Grade 10	33	8.2
Grade 11	42	10.4
Grade 12	224	55.4
Some College	41	10.2
Total	404	100.00
Age		
21 to 30	84	20.8
31 to 40	166	41.1
41 to 50	90	22.3
Over 50	64	15.8
Total	404	100.00

Objective 4. Describe the control group of offenders who did not complete the 100 hour pre-release program or vocational education while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level

e) Age

Table 4 represents the characteristics of the offenders who were sampled as part of the control group who had neither the 100 hour pre-release program nor vocational education. The gender of the offenders is 745 male or 92.2% and 63 female or 7.8%. Race of the offenders is 517 or 64.0% non-white and 291 or 36.0% white. Marital status of the population is 105 or 13.0% as married and 703 or 87.0% as single. Educational level is 102 or 12.6% who completed no high school, 111 or 13.7% completing the 9th grade, 126 or 15.6% completing the 10th grade, 128 or 15.8% completing the 11th grade, 279 or 34.5% completing the 12th grade and 62 or 7.8% completing some college courses. The mean age for this group is 39 with a standard deviation of 122.99. The age of offenders represents 228 or 28.2% as 21 to 30, 208 or 25.8% as 31 to 40, 211 or 26.1% as 41 to 50 and 161 or 19.9% being over age 50.

Table 4 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for the Control Sample (808)

Characteristic	n	Percent
Gender		
Male	745	92.2
Female	63	7.8
Total	808	100.00
Race		
Non-White	517	64.0
White	291	36.0
Total	808	100.00
Marital Status		
Married	105	13.0
Single	703	87.0
Total	808	100.00
Education Level		
No High School Attended	102	12.6
Grade 9	111	13.7
Grade 10	126	15.6
Grade 11	128	15.8
Grade 12	279	34.5

(Table 4 Continued)

Characteristic	n	Percent
Some College	62	7.8
Total	808	100.00
Age		
21 to 30	228	28.2
31 to 40	208	25.8
41 to 50	211	26.1
Over 50	161	19.9
Total	808	100.00

Objective 5. Describe the offenders who recidivated from the entire population on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 5 shows the characteristics of the offenders who recidivated from the three groups. This table addresses all offenders from the entire sample who recidivated upon release. These offenders are inclusive of the 404 offenders who completed the 100 hour pre-release, the 404 offenders who completed the vocational education classes, also the 808 offenders who were identified as the control group who received neither of the interventions. The total number of offenders who recidivated were 546 out of the 1616 total sample. This is 33.8% of the total sample population. The gender of this population is classified as 526 or 96.6% male and 20 or 3.7% female. The race of the recidivists is 346 or 63.4% non-white and 200 or 36.6% white. Married offenders accounted for 58 or 10.6% and single recidivist offenders accounted for 488 or 89.4%. The educational level of the recidivist offenders is 60 or 11.0% completed no high

school, 75 or 13.7% completed 9th grade, 85 or 15.6% completed 10th grade, 83 or 15.2% completed 11th grade, 209 or 38.3% completed the 12th grade and 34 or 6.2% completed some college courses. The mean age for the recidivists is 37 with a standard deviation of 10.08. The breakdown in years is 21 to 30 is 170 or 31.1%, 31 to 40 is 163 or 29.9%, 41 to 50 is 137 or 25.1% and offenders over 50 accounted for 76 or 13.9% of the recidivist population. When entering the variables individually against recidivism, the variables of gender, marital status and age were found to be significant factors within the entire sample of recidivists. Gender was statistically significant at the .004 level, marital status was statistically significant at a .039 level and age was significant at the <.001 level.

Table 5 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for Recidivist for the Entire Sample (546)

Characteristic	n	Percent
Gender		
Male	526	96.3
Female	20	3.7
Total	546	100.00
Race		
Non-White	346	63.4
White	200	36.6
Total	546	100.00
Marital Status		
Married	58	10.6
Single	488	89.4
Total	546	100.00
Education Level		
No High School Attended	60	11.0
Grade 9	75	13.7
Grade 10	85	15.6
Grade 11	83	15.2
Grade 12	209	38.3
Some College	34	6.2
Total	546	100.00

(Table 5 Continued)

Characteristic	n	Percent
Age		
21 to 30	170	31.1
31 to 40	163	29.9
41 to 50	137	25.1
Over 50	76	13.9
Total	546	100.00

Note. chi square=gender 8.470 $p<.004$, marital status 4.244 $p<.039$, age 36.808 $p<.001$

Objective 6: Describe the offenders who recidivated that completed the 100 hour pre-release program on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 6 describes the 146 recidivists from the 404 offenders who participated in the 100 hour pre-release program. The gender of recidivating offenders is 145 or 99.3% males and 1 or .7% female. The race of the 100 hour recidivist is 98 or 67.1% non-white and 48 or 32.9% white. The marital status is 14 or 9.6% married and 132 or 90.4% single. Educational levels for the 100 hour recidivists are no high school attended 16 or 11.0%, completed grade 9 is 22 or 15.1%, completed grade 10 is 19 or 13.0%, completed grade 11 is 31 or 21.2%, completed grade 12 is 33.5% and those that had completed some college courses is 9 or 6.2%. The mean age for this recidivist population is 38 with a standard deviation of 10.8. The breakdown of age categories for this population is 21 to 30 is 33 or 22.6%, 31 to 40 44 or 30.2%, 41 to 50 is 38 or 26.0% and over 50 is 31 or 21.2%. When entering the variables individually against recidivism,

age was the only factor that was found to be significant. Age was statically significant at the .014 level.

Table 6 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for Recidivist for the 100 Hour Pre-Release Group (146)

Characteristic	n	Percent
Gender		
Male	145	99.3
Female	1	.7
Total	146	100.00
Race		
Non-White	98	67.1
White	48	32.9
Total	146	100.00
Marital Status		
Married	14	9.6
Single	132	90.4
Total	146	100.00
Education Level		
No High School Attended	16	11.0
Grade 9	22	15.1
Grade 10	19	13.0
Grade 11	31	21.2
Grade 12	49	33.5
Some College	9	6.2
Total	146	100.00
Age		
21 to 30	33	22.6
31 to 40	44	30.2
41 to 50	38	26.0
Over 50	31	21.2
Total	146	100.00

Note. chi square=age 6.004, p<.014

Objective 7. Describe the offenders who recidivated that completed vocational education on the following demographic characteristics:

a) Gender

b) Race

- c) Marital Status
- d) Highest Education Level
- e) Age

Table 7 examines the 131 offenders who recidivated out of the 404 offender sample who completed the vocational education program. The gender of this offender population is 126 or 96.2% male and 5 or 3.8% female. The race is 66 or 50.4% non-white and 65 or 49.6% white. Marital status is represented by 14 or 10.7% of offenders who are married and 117 or 89.3% of offenders who are single. The educational level for these offenders is 12 or 9.2% who completed no high school, 11 or 8.4% completed the 9th grade, 11 or 8.4% completed the 10th grade, 13 or 9.9% completed the 11th grade, 79 or 60.3% have completed high school and 5 or 3.8% completed some type of college courses. The mean age of these offenders is 35 with a standard deviation of 8.9. The age ranges for this population is 42 or 32.1% for offenders age 21 to 30, 31 to 40 is 53 or 40.5%, 41 to 50 is 26 or 19.8% and offenders over 50 accounting for 10 or 7.6%. When entering the variables individually against recidivism, gender and age were found to be statistically significant. Gender was significant at the .03 level and age was significant at the <.001 level.

Table 7 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for Recidivist for the Vocational Education Sample (131)

Characteristic	n	Percent
Gender		
Male	126	96.2
Female	5	3.8
Total	131	100.00
Race		
Non-White	66	50.4
White	65	49.6
Total	131	100.00

(Table 7 Continued)

Characteristic	n	Percent
Marital Status		
Married	14	10.7
Single	117	89.3
Total	131	100.00
Education Level		
No High School Attended	12	9.2
Grade 9	11	8.4
Grade 10	11	8.4
Grade 11	13	9.9
Grade 12	79	60.3
Some College	5	3.8
Total	131	100.00
Age		
21 to 30	42	32.1
31 to 40	53	40.5
41 to 50	26	19.8
Over 50	10	7.6
Total	131	100.00

Note. chi square=gender 4.53, $p<.03$, age 18.198, $p<.001$

Objective 8. Describe the offenders who recidivated from the control group population on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 8 describes the control group of recidivists. This sample consisted of 808 offenders out of which 269 were recidivists. This is a percentage of 33.3. The gender of this recidivist population is 255 or 94.8% male and 14 or 5.2% female. The race of these recidivists is 182 or 67.7% non-white and 87 or 32.3 white. The marital status of this recidivist population

is 30 or 11.2% married and 239 or 88.8% single. Educational levels are 32 or 11.9% have completed no high school, 42 or 15.6% have completed the 9th grade, 55 or 20.5% have completed the 10th grade, 39 or 14.5% have completed the 11th grade, 81 or 30.1% have completed the 12th grade and 20 or 7.4% have completed some college courses. The mean age of this recidivist population is 36 with a standard deviation of 10.07. The age is broken down by 95 or 35.3% aged 21 to 30, 66 or 24.6% aged 31 to 40, 73 or 27.1% age 41 to 50 and 35 or 13.0% over age 50.

Table 8 Demographic Characteristics of Gender, Race, Marital Status, Education and Age for Recidivist for the Control Sample (269)

Characteristic	n	Percent
Gender		
Male	255	94.8
Female	14	5.2
Total	269	100.00
Race		
Non-White	182	67.7
White	87	32.3
Total	269	100.00
Marital Status		
Married	30	11.2
Single	239	88.8
Total	269	100.00
Education Level		
No High School Attended	32	11.9
Grade 9	42	15.6
Grade 10	55	20.5
Grade 11	39	14.5
Grade 12	81	30.1
Some College	20	7.4
Total	269	100.00
Age		
21 to 30	95	35.3
31 to 40	66	24.6
41 to 50	73	27.1

(Table 8 Continued)

Characteristic	n	Percent
Over 50	35	13.0
Total	269	100.00

Note. chi square=gender 3.849, $p<.05$, age 16.658, $p<.001$

Objective 9. Determine which program, Vocational Education or Pre-Release, has a more positive impact on offender recidivism.

Table 9 examines the recidivism relationship between each group. The 100 hour pre-release, vocational education and the control group are cross tabulated relative to the variable of recidivism. This cross tabulation was done to determine the effectiveness of the interventions used against each other and the control group. The offenders who participated in the Department's 100 hour pre-release program recidivated at a rate of 36.1%. The offenders who participated in the vocational education program recidivated at a rate of 32.4%. Finally, the offenders that comprised the control group recidivated at a rate of 33.3%.

Table 9 Chi-Square Results for Total Recidivism Rates by Intervention

Intervention Type	Sample Size	N Recidivated	% Recidivated
100 Hour Pre-Release	404	146	36.1%
Vocational Education	404	131	32.4%
Control Group	808	269	33.3%
Total	1616	546	33.8%

Note. Chi-Square = 1.42, Sig. = 0.491

The chi-square test is used to test for significant relationships at the .05 level of significance which indicated a chi-square value of 7.81. The actual value of 1.42 is well below the required value to show a significant relationship. The test was completed and showed no significant relationship between the type of intervention and the rate of offender recidivism. Therefore, the data showed that if an offender completed either the 100 hour pre-release program or the vocational education program, there was no significant impact on their rate of return to the prison system.

Binary Logistical Regression Analysis

The ability to determine associations related to specific demographic factors and recidivism in the sampled population is completed using logistical regression analysis. The total population (N=1616), the 100 hour pre-release offenders (N=404), the vocational education offenders (N=404) and the control group of offenders (N=808) were analyzed using the logistical regression procedures.

Objective 10. Determine if a relationship exists between recidivism and offender's program completed and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 10 presents the logistical regression model completed on all offenders in the total population. The significance level to be considered a predictor is set as .05. According to Hair et. al. (2006) the minimum sample size for groups is twenty observations for each group. The three groups, two treatments and the control, all exceeded the twenty observations criteria. This is also evident when examining specific demographic variables that are being examined. Therefore, the test is seen to be appropriate to determine a predictive model for the sample population.

The first analysis examined if the demographic factors and the treatment models had any type of influence on the offender's recidivism rates. The prediction model included all demographic factors studied and also the two treatment groups including the control group.

These variables were entered into the analysis in order to accomplish the objective of the research. Variables entered were gender, race, marital status, education, pre-release program, vocational education and no treatment. Several factors were considered to be dichotomous and are coded as follows: race which is defined by 1 non-white offender and 2 as white offender, gender is defined as 1 for male and 2 for female and marital status was 1 for single and 2 for married. Programming is coded as 1 for the 100 pre-release, 2 for vocational education and 3 for no programming or control group. Finally, both age and education were analyzed as continuous variables with age being actual age of the offender on December 31, 2013 and education was classified as actual grade completed. The number 13 was added to account for offenders who reported having some college courses. When examining the three groups the same data was entered for each specific group without the treatment variable as it was already found to be not significant by using both regression tests. The strength of association in the overall logistic regression model is expressed using the Nagelkerke r squared statistic which describes how well the regression model explained the variation in the variable recidivism (Tabachnick & Fidell, 2012).

Table 10 shows the variable of recidivism being studied as a predictive model using the specific demographic factors. The entire offender population was entered into the binary logistical regression model, and this predictive model indicated an overall Nagelkerke, an r squared value of .032. This model resulted in a -2 Log likelihood score of 2013.89, compared to the constant model that resulted in a -2 Log likelihood score of 2059.280. This difference in the -2 Log Likelihood scores is 45.38, which is equal to the Omnibus Test of Model Coefficient chi-square score of 45.384 or a significance level of $<.001$. Finally, this model of fit for test two was determined to be the model of best fit on the basis of the Hosmer and Lemeshow Test results of

chi-square score of 17.417 and a significance level of .026. This indicates that there was a significant difference in the predictive model and the observed model. Hair et. al (2006) indicates that when the Hosmer Lemeshow test result is significant, it is indicative of a poor model fit.

When the model was examined for significant predictive variables, the findings indicated that the variable of gender was a significant contributor to the model with a Wald chi-square score of 6.777 or a significance value of .009. The test showed that male offenders were 1.96 times more likely to return as recidivists than females. The variable of age was also found to be a significant variable to the model with a Wald chi-square score of 35.574 or a significance value of <.001. This indicates that the age of offenders predicts an increase in recidivism at 3% as their age drops by one year. There were no other variables in the analysis that were found to be significant predictors of recidivism in the entire offender population.

Table 10 Binary Logistic Regression of the Entire Offender Population on Demographic/ Programmatic Indicators to Predict Recidivism

		Chi-Square		df		Sig.	
Model		45.384		2		<.001	
-Variables in the Equation-							
Variable	B	S.E.	Wald	Df	Sig.	Exp (B)	
Gender	.672	.258	6.777	1	.009	1.958	
Age	-.030	.005	35.574	1	<.001	.970	
Constant	-.137	.325	.177	1	.674	.872	
-Variables not in the Equation-							
Variable		Score		df		Sig.	
Race		.009		1		.923	
Marital Status		1.812		1		.178	
Education		1.201		1		.273	
100 Hour Pre-Release		1.576		1		.209	
Vocational Education		.759		1		.384	
Control		.104		1		.747	

Table 11 is the classification model that indicates if the model used was found to be predictive. The model showed no predictive ability when looking at the demographic factors

studied. The model did not have a change in prediction from the initial classification of offenders.

Table 11 Classification Results for Recidivism for the Entire Population During the Period of Release

Observed	Recidivist	Predicted Recidivist	Percentage Correct
No	1070	0	0
Yes	546	0	0
Overall Percentage			66.1%

Objective 11. Determine if a relationship exists for those offenders who completed the 100 hour pre-release program between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 12 shows the variable of recidivism being studied as a predictive model using the specific demographic factors. The 100 hour pre-release offender population was entered into the binary logistical regression model, and this predictive model indicated an overall Nagelkerke, an r squared value of .021. Also, the model resulted in a -2 Log likelihood score of 518.695, compared to the constant model which resulted in a -2 Log likelihood score of 524.733. This difference in the -2 Log Likelihood scores is 6.079, which is equal to the Omnibus Test of Model Coefficients chi-square score of 6.079 or a significance level of .014. Finally, this model of fit for test was determined to be the model of best fit on the basis of the Hosmer and Lemeshow Test results of a chi-square score of 7.267 and a significance level of .508. This indicates that there was not a significant difference in the predictive model and the observed model. Hair et. al

(2006) indicates that when the Hosmer Lemeshow test result is not significant it is indicative of a good model fit.

When the model was examined, the findings indicated that the variable of age was a significant contributor to the model with a Wald chi-square score of 5.394 or a significance value of .015. This indicates that the age of offenders predicts an increase in recidivism at 2.4% as their age drops by one year. There are no other variables in the equation that showed significance as demonstrated in Table 12. Age was the only variable found to be a significant predictor when examining the model as it relates to offender recidivism for the 100 hour pre-release participants.

Table 12 Binary Logistic Regression of the Offenders Completing the 100 Hour Pre-Release Program on Demographic Indicators to Predict Recidivism

	Chi-Square	Df	Sig.
Model	6.079	1	.014

-Variables in the Equation-

Variable	B	S.E.	Wald	Df	Sig.	Exp (B)
Age	-.024	.010	5.934	1	.015	.977
Constant	.383	.401	.915	1	.339	1.467

-Variables not in the Equation-

Variable	Score	Df	Sig.
Gender	.030	1	.862
Race	.055	1	.815
Marital Status	3.287	1	.070
Education	.087	1	.768
Overall Stats.	3.557	4	.469

Table 13 is the classification model that indicates if the model used was found to be predictive. The model showed no predictive ability when looking at the demographic factors studied. The model did not have a change in prediction from the initial classification of offenders.

Table 13 Classification Results for Recidivism for the 100 Hour Pre-Release Population During the Period of Release

Observed	Recidivist	Predicted Recidivist	Percentage Correct
No	258	0	0
Yes	146	0	0
Overall Percentage			63.8%

Objective 12: Determine if a relationship exists for those offenders who completed vocational education between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 14 shows the variable of recidivism being studied as a predictive model using the specific demographic factors. The vocational education offender population was entered into the binary logistical regression model, and this predictive model indicated an overall Nagelkerke, an r squared value of .066. Also, the model resulted in a -2 Log likelihood score of 488.084, compared to the constant model which resulted in a -2 Log likelihood score of 507.497. This difference in the -2 Log Likelihood scores is 19.413, which is equal to the Omnibus Test of Model Coefficients chi-square score of 19.413 or a significance level of <.001. Finally, this model of fit test was determined to be the model of best fit on the basis of the Hosmer and Lemeshow Test results of chi-square score of 8.605 and a significance level of .377. This indicates that there was not a significant difference in the predictive model and the observed model. Hair et. al (2006) indicates that when the Hosmer Lemeshow test result is not significant it is indicative of a good model fit.

When the model was examined, the findings indicated that the variable of age was a significant contributor to the model with a Wald chi-square score of 17.334 or a significance value of <.001. This indicates that the age of offenders predicts an increase in recidivism at 5% as their age drops by one year. There are no other variables in the equation that showed significant as demonstrated in table 14. Age was found to be the only significant predictor when examining the model as it relates to offender recidivism for the vocational education program participants.

Table 14 Binary Logistic Regression of the Offenders Completing the Vocational Educational Program on Demographic Indicators to Predict Recidivism

		Chi-Square		Df		Sig.	
Model		19.413		1		<.001	
-Variables in the Equation-							
Variable	B	S.E.	Wald	Df	Sig.	Exp (B)	
Age	-.050	.012	17.334	1	<.001	.951	
Constant	1.147	.452	6.440	1	.011	3.148	
-Variables not in the Equation-							
Variable		Score		Df		Sig.	
Gender		2.475		1		.862	
Race		2.753		1		.815	
Marital Status		.003		1		.070	
Education		1.169		1		.768	
Overall Stats.		8.065		4		.089	

Table 15 is the classification model that indicates if the model used was found to be predictive. The model showed no predictive ability when looking at the demographic factors studied. The model did not have a change in prediction from the initial classification of offenders.

Table 15 Classification Results for Recidivism for the Vocational Education Population During the Period of Release

Observed	Recidivist	Predicted Recidivist	Percentage Correct
No	273	0	0
Yes	131	0	0
Overall Percentage			67.4%

Objective 13. Determine if a relationship exists for the control group of offenders between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Table 16 shows the variable of recidivism being studied as a predictive model using the specific demographic factors. The control group offender population was entered into the binary logistical regression model, and this predictive model indicated an overall Nagelkerke, an r squared value of .029. Also, the model resulted in a -2 Log likelihood score of 1008.601, compared to the constant model which resulted in a -2 Log likelihood score of 1025.710. This difference in the -2 Log Likelihood scores is 6.079, which is equal to the Omnibus Test of Model Coefficients chi-square score of 17.108 or a significance level of $<.001$. Finally, this model of fit test was determined to be the model of best fit on the basis of the Hosmer and Lemeshow Test results of chi-square score of 15.608 and a significance level of .048. This indicates that there was a significant difference in the predictive model and the observed model. Hair et. al (2006) indicates that when the Hosmer Lemeshow test result is significant it is indicative of a poor model fit.

When the model was examined, the findings indicated that the variable of age was a significant contributor to the model with a Wald chi-square score of 16.367 or a significance value of $<.001$. This indicates that for the age of offenders predicts an increase in recidivism at 2.9% as their age drops by one year. There are no other variables in the equation that showed

significance as demonstrated in Table 16. Age was found to be the only significant predictor when examining the model as it relates to offender recidivism for the control group.

Table 16 Binary Logistic Regression of the Offenders that Completed no Programming on Demographic Indicators to Predict Recidivism

	Chi-Square	Df	Sig.
Model	17.108	1	<.001

-Variables in the Equation-

Variable	B	S.E.	Wald	Df	Sig.	Exp (B)
Age	-.029	.007	16.367	1	<.001	.972
Constant	.421	.280	2.252	1	.133	1.523

-Variables not in the Equation-

Variable	Score	df	Sig.
Gender	3.313	1	.069
Race	2.423	1	.120
Marital Status	.139	1	.709
Education	.768	1	.375
Overall Stats.	5.865	4	.209

Table 17 is the classification model that indicates if the model used was found to be predictive. The model showed no predictive ability when looking at the demographic factors studied. The model did not have a change in prediction from the initial classification of offenders.

Table 17 Classification Results for Recidivism for the No Programming Population During the Period of Release

Observed	Recidivist	Predicted Recidivist	Percentage Correct
No	539	0	0
Yes	269	0	0
Overall Percentage			66.6%

Overall, the binary logistical regression model did not find a significant predictive model for recidivism in the total population or in any of the sub-populations. One demographic variable that was seen as consistently significant was age. The variable gender was only significant in the total population. All other demographic variables offered no value to the predictive model used in the study.

CHAPTER 5: SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Introduction

This study was designed to compare the recidivism rates of adult offenders who were provided two interventions, vocational education and a 100 hour pre-release program, against each other and also a control group that was not provided either type of intervention. The total number of offenders in the study included a total population of 1616. The number of offenders in each of the 100 hour pre-release program and the vocational education population is 404 which totals 808. The control population is represented by 808 offenders lending to a balance in those offenders who had received treatment and those who had not received either treatment.

This chapter presents the summary of the study including any conclusions reached as it relates to the data analysis on each of the study objectives. The next part of the chapter will focus on the implications of the research study including what type of program implementation or integration may be necessary for the programs examined. Finally, recommendations will be made related to the research study itself based in the findings.

Summary

The population under analysis was composed of 1,517 males and 99 females (total N=1,616) who participated in vocational education, the 100 hour pre-release program or participated in no programming at all (control group). The methodology of how this sample was chosen was previously discussed but based on the data analysis, the sample was large enough to complete and necessary analysis. The descriptive findings of the sample population found minor differences in the populations. The chi-square test was conducted in an attempt to determine which offender programs studied were found to be significant in reducing offender recidivism against a control group of offenders that received neither treatment. Finally, binary logistical

regression attempted to determine a predictive model relative to the overall population and then the three sub-groups in terms of demographic factors. While a few demographic factors were found to be significant in predicting recidivism, a prediction model could not be found when using all identified demographic factors.

Conclusions

Objective 1. Describe the sampled offenders who released from prison in 2010 from the Louisiana DPS&C on the following demographic characteristics and recidivism rates:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The demographic factors for the entire sample of offenders used in the study showed some significant factors when examined closely. Most of the offenders in the total population were male at 1517 of the 1616 subjects studied or 93.9%. Females only accounted for 6.1% of the total population studied. Non-white offenders accounted for the largest portion of offenders with 1016 offenders or 62.9%. The number of white offenders was almost half at 600 offenders or 37.1%. Both racial groups, white and non-white, were well represented in the study with more than adequate numbers for examination. When looking at the demographic factor of marital status, the largest number of offenders was found to be single. They totaled 1404 or 86.9% and married offenders were definitely in the minority at only 212 or 13.1% of the 1616 offenders. Looking at offender education and the categories that offenders were grouped allowed for similar offenders who completed similar educational levels to be grouped together.

The largest group was those offenders that had completed high school and this total was 648 offenders or 40.1%. The smallest group was those that had completed some type of college courses and this total was 127 or 7.9% the population. Finally, offender's age at the time of the study was a factor that varied the most. The youngest offender had an age of 21 while the oldest offender in the study was age 73. Most offenders fell in the 31-40 year old age group with 497 or 30.8%. However, all age groups 21 to 30, 31 to 40, 41 to 50 and above 50 provided a somewhat equal distribution with all others being within the 20% range of total population. Overall, the sample population provided for 1616 offenders from a wide range of demographic characteristics. This provided a comprehensive review of offenders that come from different age, race, gender, marital status and educational levels. One item to note in the overall population was the large percentage of offenders who had reported completing the 12th grade. While the research conducted by the Department of Public Safety and Corrections indicated that the overall grade level of offenders was the seventh grade. Additionally, many offenders were unable to read or write at a level that could be documented (LeBlanc, 2013). This contrast in educational level could be based in the inability to effectively document offender educational status upon entry into the system.

Objective 2. Describe the offenders who completed the 100 hour pre-release program while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

This group of offenders is the first group of offenders who had taken and applied the material from the 100 hour pre-release program as the program was started in 2010, their year of release. While the numbers of offenders are somewhat low, 404, compared to the correctional population, these offenders were placed in the course to assist with their reintegration back into society. One area to note is the initial delay in getting female offenders into the program. During the year of release in question, only three females had completed the course compared to 401 male offenders. There were a higher percentage of these offenders being married at 14.6%. The age of offenders is consistent with the overall sample population due to the largest percentage of offenders (30.4%) falling into the 31 to 40 year old age group. All other age groups remained in the 20% range. Finally, the largest population of offenders was again found to have completed the 12th grade at 35.9%. Overall, the 100 hour pre-release population is fairly consistent with the overall population when examining the studied demographic characteristics of the offenders.

Objective 3. Describe the offenders who completed vocational education while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The gender of offenders completing vocational programming is 371 males or 91.8%. This is more consistent with the overall population of the entire sample and the control sample. The number of white offenders is 177 or 43.8% compared to 37.1 % for the entire population,

32.7% for the offenders who completed the 100 hour pre-release program and 36.0% of the control group. There were no indications in the data why white offenders were more likely to be placed in vocational training. The only other factor that was determined to be somewhat different is the increase in the number of offenders who have completed 12 years of education. The total in this sample is 224 or 55.4% as compared to 40.1% is the total population, 35.9% in the 100 hour re-entry group and 34.5% for the control group. The ability to engage in vocational training requires a certain level of academic skills. This should be reflected in the finding of a higher rate of offenders that have completed the 12th grade. This was also evident in the research completed by Davis et al. (2013) whereby offenders who participated in vocational education had higher educational levels when compared to offenders participating in other forms of educational programming.

Objective 4. Describe the control group of offenders who did not complete the 100 hour pre-release program or vocational education while incarcerated in the Louisiana DPS&C on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

When examining the demographic characteristics of the control group of offenders, males continue to make up the large majority of the sample with 745 or 92.2%. Marital status provides for a larger number of offenders who are single with 1404 or 86.9%. This is in line with the reports of the previous groups. Finally, when comparing all other characteristics, they remain

constant against the 100 hour per-release group, the vocational education group and the entire population.

Objective 5. Describe the offenders who recidivated from the entire population on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The first item to note is the decrease in percentage of females that recidivated relative to the entire population. The entire sample showed 6.1% female representation while the recidivist showed a 3.7% representation. This indicates the percentage is nearly half of the overall sample. The level of education also shows a higher percentage of offenders in the total population who completed the 12th grade at 40.1% than in the recidivists at 38.3%. Another item to note is the mean age for the recidivist is 37 compared to 39 when looking at the entire population. This translates into the highest level of recidivism related to age is in the 21 to 30 year old group with 107 recidivist or 31.1%. All other characteristics are in line with the overall sample population. The increased level of recidivists in relation to gender is evident when examining the overall demographic factors of all recidivists in the study. This was also found in the literature whereby Houston (2009) also found that males recidivated at higher levels than did females. Additionally, these increases discovered were in line with what was found with this sample population. When examining these variables against recidivism three were found to be significant. Gender, marital status and age were found to be significant predictors at the .05

level. The variable marital status was significant and this is what was found by researchers Berg and Huebner (2011) that when offenders have some type of family support upon release, their chances for successful reintegration will be increased.

Objective 6: Describe the offenders who recidivated that completed the 100 hour pre-release program on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The ability to accurately assess any differences in gender is compromised by the low number of female offenders who completed the course. While three females completed the course, one did recidivate and return to prison during the study period. All other factors examined compared relatively closely with the percentages of all the offenders who recidivated. When compared to recidivism the only factor that was found to be significant was the offender's age. Younger offenders have a higher chance of recidivating than do older offenders. This was discussed by Latessa (2012) in that the risk and needs based approach must be used to identify an offender's need for programming and age is a factor that must be considered, especially for younger offenders who have committed multiple previous offenses. The research showed that many times offenders "graduate" out of criminal behavior when they become older and younger offenders tend to be more likely to continue criminal activity thereby increasing their chances of returning to prison at higher rates.

Objective 7. Describe the offenders who recidivated that completed vocational education on the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

Again, female offenders who completed the vocational education program recidivated at a smaller percentage than the larger population at 3.8%. Another item to note is the balance in recidivists as it relates to race. White offenders in the entire recidivist population constituted 36.6% of recidivist but when looking at those offenders from the vocational education group, they recidivated at 49.6% of this sample population. While the number of white offenders increased in percentage in the total vocational education sample, the rate increased more when examining those offenders who recidivated. The percentage went from 43.8% in the total vocational education population to 49.6% when examining the recidivist in this group. Also, the percentage of recidivist for this sample that had completed high school is 79 or 40.5%. This is a slight increase in percentage relative to the entire recidivist population who had a percentage of 38.5%. However, this higher percentage can be explained by the 55.4% in the total vocational education population who had completed the 12th grade. When comparing the variables against recidivism, the variables gender and age were both significant at the .05 level.

Objective 8. Describe the offenders who recidivated from the control group population on the following demographic characteristics:

- a) Gender

- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The control group sample is in line with the other recidivist groups concerning the female recidivist being reduced at 5.2%. Also, the age group of 31-30 years old showed an increase in recidivist percentage to 35.3% from 31.1% of the total recidivist population. This was a consistent finding compared to other groups relative to age but the control group showed the higher percentage of all three sub groups. The number of white and non white offenders is in line with other recidivist groups other than the vocational education group. Overall, the percentages reflected in other demographic characteristics continue to be in line with what is found in other sub-samples of the population.

Objective 9. Determine which program, Vocational Education or Pre-Release, has a more positive impact on offender recidivism.

One item of interest to note was that the rate of recidivism (36.1%) for those offenders who completed the 100 hour pre-release program was higher than those offenders who were not provided either intervention (33.3%). The 100 hour per-release group was also found to be higher than the vocational group (32.4%) relative to rate of recidivism. While the vocational group did have the lowest return to incarceration rate, the difference in this rate was not found to be significant.

When examining these results against the literature, the lack of significant differences in the offenders completing the programs continues to be complicated by a number of factors. First, the Pew (2013) and MacKenzie (2008) studies indicated a definite need to conduct

research in formal process to evaluate these programs on a level playing field. The literature reviewed indicates that studies completed examining these types of causal relationship are conducted using significantly different methodologies. Having a specific manner in which programs are judged to be effective using specific methodologies can be helpful in determining just what programs are working. Additionally, when examining vocational programs, Davis et al. (2013) and Jensen and Reed (2006) both found a significant relationship to offenders participating in educational programming and recidivism rates. However, these reductions in recidivism rates must be judged against the need for community and family support as found by Drain and Wolff (2009) and Coleman (1990). Without accounting for the necessary stressors in the community and the need for continued support, the gains experienced by decreased recidivism rates in educational programming, may be reduced by these factors.

The 100 hour pre-release program showed no positive results and it is noted to have performed worse than providing no programming to the offender population. Again, as with the issues found with educational programming, the ability to conduct studies with the necessary rigor was also found to be an issue (Petersilia, 2009). The need to have a uniform manner in which studies are measured including a specific research methodology is necessary to place all programs offered on similar playing fields. While some programs that targeted offender re-entry were found to be ineffective in significantly reducing recidivism rates such as Severson et al. (2011) and Redcross et al. (2010), the ability to pinpoint why these programs were not effective were difficult to identify. The need to look at not only programming but other factors surrounding offender risk factors is necessary as discussed by Latessa (2012). Latessa indicates a need to not only examine program effectiveness but also the risk and needs of the offenders entering the programs. It is felt that having the correct offender in the program will increase

outcomes as offenders are given the necessary supports depending on need. Additionally, research that was evident and was lacking in the 100 hour pre-release program studied was the need to provide community supports upon release. Bushway and Apel (2012), Kachnowski (2005) and Houston (2009) found that re-entry programming was most successful when programming was offered at the community level upon release. This included social supports, job placement and substance abuse treatment. The need to follow offenders upon release and provide the necessary assistance makes a significant difference in implementing an effective program that has an impact on recidivism.

Objective 10. Determine if a relationship exists between recidivism and offender's program completed and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The logistical regression analysis completed on the total population examined the relationship of the offender's program completion and found none of the three to be significant predictors. When examining the demographic factors of the total population only gender and age were found to be significant. Gender was significant at the .009 level of significance and age at the <.001 level indicating males were far more likely to recidivate than females as were younger offenders. This model indicated that these two factors were predictors of recidivism. The total offender population was the only model that had two variables, gender and age, as predictors of recidivism. All other models had only one variable, age that was found to be significant. When

looking at the complete model, the data showed there was no difference in the predictive model. Lowencamp et al. (2006) found that there is a definite need to have a comprehensive risk model to identify offenders who are in need of specific services. The inability to develop a significant model is an issue with the outcomes of this study and can be tied to the lack of an effective program. The researchers believe there is a need to clearly identify those offenders in need of programming using an assessment tool and placing those offenders in programming will benefit this population.

Objective 11. Determine if a relationship exists for those offenders who completed the 100 hour pre-release program between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The logistical regression analysis completed on the 100 hour pre-release population examined the relationship of the offender's demographic variables, and age was the only variable found to be significant. Age was significant at the .015 level of significance and indicated again that the younger the offender the greater likelihood of recidivating. When looking at the complete model there was no difference in the predictive model.

Objective 12: Determine if a relationship exists for those offenders who completed vocational education between recidivism and the following demographic characteristics:

- a) Gender
- b) Race

- c) Marital Status
- d) Highest Education Level
- e) Age

The logistical regression analysis completed on the vocational education population examined the relationship of the offender's demographic variables, and age was again the only variable found to be significant which indicated again that the younger the offender the greater the likelihood of recidivating. Age was significant at the $<.001$ level of significance. When looking at the complete model there was no difference in the predictive model.

Objective 13. Determine if a relationship exists for the control group of offenders between recidivism and the following demographic characteristics:

- a) Gender
- b) Race
- c) Marital Status
- d) Highest Education Level
- e) Age

The logistical regression analysis completed on the control group population examined the relationship of the offender's demographic variables and again age was the only variable found to be significant, indicating that the younger the offender the greater likelihood of them recidivating. Age was significant at the $<.001$ level of significance. When looking at the complete model there was no difference in the predictive model.

Implications

The ability to draw implications from this research project is challenging due to the inability to show one level of treatment to be significant in reducing recidivism. Without a clear

and definitive positive outcome for either program, it is difficult to justify continued funding for programs that show results that do not significantly impact recidivism rates such as vocational education. Additionally, how can there be justification for a program that has results that are poorer, while not significantly poorer, than those offenders who received neither program such as the case with the 100 hour pre-release program? Also, what is necessary to be able to adequately develop a model that identifies predictors related to offender recidivism? While the research conducted had limitations related to what was determined by the data, the implications could be profound when examined in the context of the literature available in this field.

When examining the 100 hour pre-release program the ability to examine the effectiveness against best practices should be a priority when evaluating and revising a program. I am certain that it is evident based on the initial data that the 100 hour program needs to be revised to include certain program components that are necessary for effective programming. When the program was reviewed for content, the subjects presented are those that are necessary in the need to assist offenders with the re-entry process. As found in the study completed by Winterfield, Brumbough and Lindquist in 2007, the ability to provide for a comprehensive re-entry program, agencies must recognize the needs of the offender and provide a program that adjusts to these needs. The 100 hour program is one that has been in existence for four years with no evaluation or adjustments. As indicated by Latessa (2012), he distinguished between the need of re-entry programs that actually want to help offenders and those that want to reduce offender recidivism. The ability to provide for a program that addresses needs of the offender in a way that touches on cognitive thought processes requires more intensive programming than that of the 100 hour re-entry program that only teaches material in a classic strategy of lecture and visual aids. Latessa identifies programs that engage offenders in scenarios that are real

world in nature and have them identify ways in which to handle these situations once released. The offenders must be prepared with not only the knowledge of how to do such things as get jobs, not associate with negative peers, control anger and other important information but also with the skills necessary to handle real world situations as they develop and are not addressed. These are the type of interactions with peers and others that could lead to further criminal behavior and possibly a return to prison.

Vocational education programming has been used in the correctional setting in various states to assist offenders with their ability to secure employment upon release. The current program only allows for offenders to access educational programs and the ability to secure employment is often left to the offender. This type of program implementation is contradictory to what was found in a recent study by Lattimore, Barrick, Cowell, Dawes, Steffey and Tueller (2012). These researchers not only looked at what was done relative to education inside the institution, they looked at what was done with the offenders upon release to assist with job placement. Offenders who were assisted with job placement were far more likely to maintain their jobs upon release and were therefore, less likely to return to prison. There is a definite link to be made between educating offenders with the necessary skills to do a job and ensuring they get a job in their areas of training upon release to assist with the reduction in recidivism rates.

The ability to classify offenders in the correct risk areas, specifically demographic factors must be taken into consideration. One such tool is seen as valid in predicting recidivism on certain demographic factors. The Level of Service Inventory-Revised (LSRI-R) is an instrument that continues to be examined by researchers for offender classification. Labrecque, Smith, Lovins, and Latessa (2014) looked at the LSRI-R instrument and the factors it examines. These risk factors to recidivism are as follows:

- Criminal History
- Education and Employment
- Financial Management
- Family
- Use of Leisure
- Companions
- Alcohol and Drug Use
- Mental Health
- Attitudes of Criminal Behavior

The researchers found that these factors are predictors of recidivism and that they need to be examined continually to ensure the instrument is collecting accurate data. The score of the instrument is the key to correct assessment, as all offenders do not develop all risk factors. However, the score is what drives offender recidivism making the instrument valid in capturing data that predict future incidence of recidivism. Again, the ability to predict criminal behavior is something that is necessary when agencies are faced with limited resources.

The implications of the study show that each aspect of programming needs to be examined. Also, the ability to have a valid predictive model of offender recidivism is something that is necessary and needs to be an ongoing process to ensure continued validity to the population being served. Agencies that take an approach to ensure evidence based programs that work are implemented with the correctly classified offenders continue to show better outcomes relative to offender recidivism. Those agencies that continue with programming that does not address the cognitive process of criminal behavior will continue to fund programs that may be ineffective in assisting offenders become productive members of society.

Recommendations

The study found that when examining the outcomes of the 100 hour re-entry program and the vocational education program, there was not a significant effect on recidivism rates.

Additionally, the data was unable to show a prediction model that could determine demographic factors that would be of risk for increased criminal behavior and recidivism. Based on the research project, I would make the following recommendations:

- The need to utilize a risk based assessment tool should be a priority when examining the needs of offenders. The tool can be one that is already in existence and has been validated to another state correctional population. However, the need to validate this type of instrument is important when examining the population in Louisiana.
- This risk based assessment tool needs to be implemented and used to determine placement in programming. Without some type of valid instrument to assess an offender's risk of recidivating, do we really know that the correct offenders are entering the correct type of programming?
- The 100 hour pre-release program needs to be expanded to allow for cognitive structuring types of classes as part of the curriculum. Also, this program should not be used without a community based approach to assist with offender needs upon return to their communities.
- The vocational education program is one that did perform well, but was not found to have a significant impact on recidivism rates. However, the key piece of this program is the tie that connects offenders with jobs in their field of study. This must be implemented and with the proper community supports, offenders can build upon their skill level in the community and apply what was learned in the correctional environment.

- When examining the literature, it was observed that there is also a need to educate these offenders closer to their release date. The class should begin with enough time for the offender to complete the course and release within a few months in order to retain what was learned.
- The use of a combination of programs is also recommended in that outcomes can be greatly enhanced when offenders receive both the enhanced pre-release program and vocational education. This was initially going to be part of the study to see how well offenders who completed both programs did relative to recidivism against the two independent groups. However, when examining the data, there were not enough offenders who had completed both programs during the study period.
- Finally, when conducting research in the field of corrections, there must be a set methodology and consistency in how the research is conducted. While it is not possible to use a rigorous scientific model, the ability to control for external and internal validity must be made a priority.

In summary, it is apparent that there is the need to create effective programs to have positive impacts on recidivism. This is evident in the current study as well as is the review of literature done as part of this process. The investment in correctional programs must be done in an organized and effective manner. The concept of effective programs for adult offenders can be transformed into a somewhat simple process if the correct offenders are placed in effective programs. These programs should be continually monitored to ensure offenders receive the required services and fidelity to the program is held constant. Finally, the most important aspect of offender outcomes, offender recidivism, must be monitored, and if the program is not found to have a positive impact on recidivism, adjustments must be made to ensure program

effectiveness. If the program cannot show that it is effective in reducing recidivism rates, it should be discontinued and funding directed to the expansion of programs that can show positive outcomes.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD

ACTION ON PROTOCOL APPROVAL REQUEST



Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
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TO: JC Bunch
HRE

FROM: Dennis Landin
Chair, Institutional Review Board

DATE: June 19, 2014
RE: IRB# 3495

TITLE: Adult Offender Recidivism Rates: How Effective is Pre-Release and Vocational Education Programming and What Demographic Factors that May Contribute to an Offenders Returning to Prison

New Protocol/Modification/Continuation: New Protocol

Review type: Full ☒ Expedited ☐ Review date: 6/13/2014

Risk Factor: Minimal ☒ Uncertain ☐ Greater Than Minimal ☐

Approved ☒ Disapproved ☐

Approval Date: 6/13/2014 Approval Expiration Date: 6/12/2015

Re-review frequency: (annual unless otherwise stated)

Number of subjects approved: N/A

LSU Proposal Number (if applicable):

Protocol Matches Scope of Work in Grant proposal: (if applicable)

By: Dennis Landin, Chairman 

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is **CONDITIONAL** on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE:

**All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>*

VITA

James K. Bueche, Jr. is a native of Louisiana and for the majority of his life resided in the city of Baton Rouge. He received his Bachelor of Arts degree in Criminal Justice from Southeastern Louisiana University in May 1990. He received his Master of Social Work Degree from Louisiana State University in December 1995. James is a Licensed Clinical Social Worker and a Certified Corrections Executive.

He is currently employed for the Louisiana Department of Public Safety and Corrections as a Deputy Assistant Secretary for the Office of Adult Services. James began his career as a Juvenile Probation Officer in May 1990 and has held various positions over his twenty-four year career with the Department of Corrections. This includes work with community based program development, managing the Juvenile Probation Department, the operations of an adult correctional facility, policy development and procedural oversight. He currently resides in Baton Rouge, Louisiana with his wife, Sheetal and his two children, Logan and Malini.