

TAKING STEPS TOWARD RECIDIVISM PREVENTION: EXAMINING THE
IMPACT OF COGNITIVE BEHAVIORAL THERAPY
ON JUVENILE DELINQUENCY

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Researchers within the criminal justice field have examined recidivism to discover effective methods to deter criminals from re-offending. Typically, incarceration provided specific deterrence for offenders but recidivism after release proved problematic. Using secondary data analysis, the present study evaluates a cognitive behavioral therapy [CBT] program, Reasoning and Rehabilitation, which the state of Colorado implemented in 1995 among juveniles on intensive probation. The original research team collected the data through pre- and post-questionnaires and interviews with probation officers. The pre- and post-test data are utilized to specifically analyze certain variables including self-control, empathy and problem-solving abilities. The focus of the present study is to determine the level of change in these particular variables as an outcome of completing the CBT program. This analysis also explores the value of CBT programs and examines how the programs alter an offender's level of self-control, empathy and problem-solving abilities thus reducing recidivism after completion.

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CHAPTER 1

INTRODUCTION

Criminality has evolved throughout history and criminologists have extensively researched various hypotheses to determine the causes of crime. Consequently, criminal justice agencies have implemented certain strategies targeted at controlling the offender's motivation to commit crime in attempts to reduce recidivism. Incarceration, or incapacitation, served as an appropriate method to deter criminals from further involvement in crime outside of prison (Levitt, 1998). While, for the most part, punishments given have been in line with the retributive view, realizing that the majority of offenders cannot be incarcerated for the remainder of their lifetime, the criminal justice system has over time introduced other sanction programs specifically intended to rehabilitate offenders. Criminal justice agencies using these methods ultimately desire to have the offender rehabilitated while in the criminal justice system so as to decrease the probability that they will re-offend once outside of the system. The main goal of rehabilitation is to have offenders evolve into law-abiding citizens and to not engage in illegal activity in the future.

Statement of the Problem

Crime within the United States is costly and creates distress among its victims. The criminal justice system seeks strategies that will reduce crime and deter criminals from future illegal activity. Agencies could simply place all offenders in prison but once the prison releases the inmates, they may re-offend. Furthermore, prisons experience overcrowding issues and therefore it is illogical to place all offenders in prison (Blumstein, 1995). Some criminologists attest that the criminal justice system resorts to prison as punishment too often and the costs

outweigh the benefits (Wilson, 1995). Therefore, agencies have explored other sanctions to reduce recidivism and change offender's pro-criminal attitudes.

Probation is a common alternative to incarceration used mostly with non-violent or first-time offenders. In conjunction with probation, certain rehabilitative programs prove beneficial in regards to helping offenders alter their negative thinking patterns and reduce the possibility of future recidivism (Clear & Braga, 1995). Many probation departments implemented cognitive behavioral therapy [CBT] programs to change an offender's pro-criminal attitudes and beliefs. Even attempts to rehabilitate offenders, however, have sometimes proved problematic as CBT programs may not always result in positive change. Despite the challenges, many programs have been implemented within state and federal criminal justice systems (Clear & Braga, 1995). As a result of the CBT programs, it is hoped that the participating offenders who successfully complete the program will deviate from pro-criminal attitudes and beliefs and replace them with pro-social concepts. The Reasoning and Rehabilitation program examined in the present study incorporated a CBT program component targeted at changing the attitudes and beliefs of the juvenile delinquents who participated. Utilizing this program, the state of Colorado attempted to reduce recidivism by changing the thought processes of the delinquents thereby establishing law-abiding behavior.

The Present Study

The present study utilized data obtained from delinquents who participated in a CBT program while on juvenile intensive supervision probation [JISP] in Colorado during the mid-1990s. The present study analyzed the changes in the participating delinquent's levels of self-control, empathy and problem-solving abilities as measured by the statements used in the pre- and post-questionnaires. The three particular variables this study analyzed (empathy, self-

control, and problem-solving abilities) have been found in the past to impact a person's behavior. For example, Gottfredson and Hirschi (1990) developed self-control theory discussed in their book *A General Theory of Crime*, which suggested that self-control, or the lack thereof, is significantly related to a person's likelihood of engaging in deviant behavior. While Gottfredson and Hirschi focused on self-control, Moffit (1990, as cited in Cauffman, Steinberg & Piquero, 2005) suggested that, although self-control influences their ideologies, other psychological factors also must be present to enhance an individual's participation in criminal behaviors. These other psychological factors may include empathy, or the ability of an offender to understand the feelings of others, particularly those affected by their crimes. Finally, problem-solving has also been linked to offending in that those individuals lacking in problem-solving abilities may turn to criminal or delinquent behaviors as they do not possess the skills to cope with their problems in a constructive, law-abiding manner (Brezina, 2000). This analysis isolated those variables seen as most influential and examined the effectiveness of the CBT program in producing change in the participants when compared to a control group.

Findings of the present study may help identify specific methods utilized within the CBT program, which are most effective in implementing change in the participating delinquent's thoughts and behaviors. Findings may also assist in understanding the relationship between delinquency and the variables, self-control, empathy and problem-solving abilities. Furthermore, the present study analyzed individual statements incorporated into the questionnaire to measure the three variables mentioned. By measuring the individual statements, the principal investigator identified areas where the juveniles failed to improve after the CBT program.

A hypothesis of this evaluation is that offenders who encompass low self-control, who lack in empathy and who possess few problem-solving abilities are more likely to re-offend.

Therefore, it is hypothesized that participants in the control group, who did not receive the CBT treatment, are more likely to recidivate. Also, it is hypothesized that participation in and successful completion of the CBT program should increase the offender's level of self-control, empathy and problem-solving abilities. The following section presents the specific research questions answered by the present study.

Research Questions

The present study utilized secondary data analysis to examine a CBT program facilitated among delinquents on probation within an intensive supervision program. Specifically, the analysis examined the Reasoning and Rehabilitation Cognitive Skills Development program conducted among juveniles on intensive supervision in Colorado in the mid-1990s. The original researchers randomly assigned 40 juveniles on intensive supervision probation to either the control or experimental group unless the probation officer thought the delinquent was unsuitable for the CBT program or the delinquent appeared to need the CBT program undoubtedly. Pre- and post-tests were given to the juveniles assigned to the experimental group before they began and after they completed the program. These tests were also given to a control group who did not participate in the CBT program but were still assigned to a juvenile intensive supervision caseload. Johnson and Hunter (1992) developed the pre- and post-tests utilized by the original researchers during their evaluation of a specialized drug offender program.

Due to the lack of research amongst juvenile correctional populations, especially those on intensive supervision, this analysis may help to inform the criminal justice field regarding CBT and juveniles. This study may also help therapists and correctional administrators to construct effective CBT programs in the future by identifying the areas included in the program where the most change was produced among the participants. The findings can help improve current CBT

programs within the criminal justice field by examining which parts of the program were effective and which were not.

The present study evaluated the relationship between criminality and the variables, self-control, empathy and problem-solving abilities, to determine if in fact the juveniles were lacking in these areas based on their pre-test scores. Further, if self-control, empathy and problem-solving actually increase the probability of crime, then participants who showed a positive significant change in their pre-and post-tests regarding self-control, empathy and problem-solving, should receive no new charges after completing the program. The research questions posed by this study include the following:

RQ1. Is there a difference between the pre- and post-measures of self-control as measured by the following four statements?

- a.) When you are angry with someone, you often take it out on anybody who happens to be around.
- b.) You are usually calm and not easily upset.
- c.) You can inform people that you are irritated or angry without losing your temper.
- d.) When you get angry, you often stay angry for hours.

RQ2. Is there a difference between the pre- and post-measures of problem-solving abilities as measured by the following seven statements?

- a.) You have the ability to solve most problems, even when at first no solution is obvious.
- b.) You don't like to work on a problem unless you can expect to come out with a clear-cut solution.

- c.) Thinking of similar past problems does not help much when you are trying to solve a new problem.
- d.) Some times you get so charged up emotionally that you can't think of many ways of dealing with a problem you face.
- e.) After you have solved a problem, you spend some time trying to figure out what went right or wrong.
- f.) When faced with a problem, you usually look at what sort of outside things in your environment may be adding to the problem.
- g.) You have an organized way to compare choices and make decisions.

RQ3. Is there a difference between the pre- and post-measures of empathy as measured by the three following statements?

- a.) It's okay for you to take and keep things that people are careless enough to leave laying around.
- b.) It's okay to cheat when you feel others are being unfair to you.
- c.) Taking things from supermarkets and department stores doesn't hurt anyone.

RQ4. Is there a significant difference in recidivism between those who participated in the CBT program and those who did not?

Conclusion

Crime within the United States is costly and creates a burden on its victims and the criminal justice system. Criminal justice agencies have implemented several alternative programs to serve as sentencing measures aimed at rehabilitating offenders. CBT programs have proved themselves as worthy rehabilitative avenues that can help change an offender's negative thinking patterns and deter them from future illegal activity (McGuire, 1998; Herrnstein, 1995;

Muris, Meesters, Vincken, & Eijkelenboom, 2005; Papanozzi & Gendreau, 2005). Past researchers have identified several characteristics that are abundant amongst offenders including low self-control, lack of empathy and lack of problem-solving abilities (Gottfredson & Hirschi, 1990; Brezina, 2000; Grant, Skilling, & Rice, 2001). Criminal justice agencies have executed CBT programs targeted at changing an offender's pro-criminal attitudes and beliefs. The present study analyzed a CBT program within a JISP program and specifically analyzed whether change resulted in the three variables, self-control, empathy and problem-solving abilities.

While past research attests that CBT programs have been effective in changing offender's negative behavior (McGuire, 1998; Herrnstein, 1995; Muris, Meesters, Vincken, & Eijkelenboom, 2005; Papanozzi & Gendreau, 2005), the following chapters provide a more detailed analysis of the three variables, self-control, empathy and problem-solving abilities. Chapter 2 discusses the past literature regarding the variables mentioned above and CBT programs used among the adult offender and juvenile delinquent populations. Chapter 3 includes the details of the methodology utilized to gather and analyze the data that was utilized to answer the research questions posed by the present study. Finally, Chapter 4 and Chapter 5 explain the findings and conclusions regarding the research questions, limitations and future research and policy implications for the use of CBT programs among delinquent populations.

CHAPTER 2

LITERATURE REVIEW

Although the criminal justice system currently depends heavily on incarceration as a sentencing option within the courts, other alternatives are gaining popularity in efforts to reduce recidivism and promote rehabilitation. The effectiveness of incapacitation is controversial within the criminal justice field regarding the ability to reduce recidivism rates merely because the evidence is deficient (Colson, 1998). Since prison effectiveness is questionable, other alternatives have been implemented to respond to criminal behavior and to help reduce recidivism. Chapter 2 first examines the criminal justice system's alternatives to incarceration, specifically probation. Throughout probation, agencies introduced cognitive behavioral therapy [CBT] to rehabilitate offenders within intensive supervision programs [ISP]. In addition, this chapter examines the effectiveness of CBT programs and isolates three variables, self-control, empathy and problem-solving abilities to determine the relationship between the variables and criminality.

Criminal justice systems instituted a system of probation to allow offenders to reside within the community but remain under the supervision of the courts. In addition, probation helped prison systems reduce costs within their facilities by allowing offenders to rehabilitate accordingly outside of a correctional facility. Agencies developed probation for first-time offenders who committed minor offenses and posed little threat to the community (Clear & Braga, 1995). During probation, the criminal justice system anticipated that offenders would not commit a new offense and therefore complete probation successfully. Upon completion, correctional officials expected offenders to remain law-abiding citizens. An offender sentenced to probation must follow all conditions of probation and remain in compliance. If the offender

violates his/her conditions of probation, the courts can impose harsher sanctions (i.e. incarceration) to deter offenders from further criminality. Because critics questioned the effectiveness of minimal supervision amongst probationers/parolees, intensive supervision was put into place and can be beneficial because during this type of supervision, rehabilitative programs are more abundant and available to the offenders (Clear & Braga, 1995).

Intensive Supervision Programs

Intensive supervision programs have been evaluated in the past as to their effectiveness. Paparozzi and Gendreau (2005) evaluated an intensive supervision surveillance program in New Jersey, in which officers supervised 240 high-risk adult parolees. ISP offered additional resources to parolees participating thereby enhancing their probability for rehabilitation. The researchers matched the comparison group with parolees participating in a traditional supervision program to create equivalency (Paparozzi & Gendreau, 2005). The researchers matched the comparison group based on demographics and criminal behavior patterns. According to the evaluation, the parolees participating in the ISP produced favorable results, receiving 28% lower new conviction rates and 21% lower revocation rates as compared to the comparison group on traditional supervision (Paparozzi & Gendreau, 2005). This analysis supports ISP and associates lower recidivism and revocation rates amongst offenders involved in ISP. While more studies need to be conducted to examine the effectiveness of intensive supervision among different populations, these findings are an encouraging start.

Cognitive Behavioral Therapy

Researchers have previously evaluated CBT programs to examine their effectiveness and determine if they actually assist in the rehabilitation of offenders. In one study, a team of researchers evaluated a social-cognitive intervention program, Self-Control, for young children

encompassing behavioral problems within a school setting (Muris, Meesters, Vincken & Eijkelenboom, 2005). As such behaviors have been found to eventually lead to delinquency, developing effective intervention programs to control such behavioral problems may reduce delinquency. To conduct the study, the researchers selected 42 children between the ages of nine and twelve. To be considered for the program, the behaviors of the participants must have consisted of aggressiveness and/or delinquent behavior. Once selected, the students participated in the Self-Control program originally designed by Van Manen in 2001. The program encompassed 11 weekly classes and included various exercises that strived to improve the participant's behavioral issues. The researchers evaluated the effectiveness of the Self-Control program through several questionnaires on three different occasions (Muris, Meesters, Vincken & Eijkelenboom, 2005). The first test administered was the Achenbach Questionnaire, which served to measure emotional and behavioral issues within an individual. The questionnaire incorporated questions regarding aggressive and delinquent behaviors. The second test administered was the Strengths and Difficulties Questionnaire aimed to gather data pertaining to the child's difficulties and strengths. These questionnaires both employed a three-point scale to interpret the data. The final test was the Social Cognition Skills Test, which the researchers administered to assess the participant's social-cognitive skills. The evaluation concluded that 54.8% of the parents noticed an improvement regarding their child's behavioral problems following the intervention program. Due to this, the evaluators viewed the program as effective (Muris, Meesters, Vincken & Eijkelenboom, 2005).

Furthermore, identifying an offender's underlying motivation to commit crime may help to develop programs aimed towards preventing criminality. Hellwege (1998) encouraged agencies to develop programs to help offenders change their behavior, which inherently entails

changing their attitudes and beliefs. By successfully altering an offender's pro-criminal attitudes, programs can change their thinking patterns and possibly deter criminality. CBT programs aim to give offenders the techniques to control their negative thinking patterns. Researchers have argued that low-self control, the lack of empathy and the lack of problem-solving abilities can impact delinquent and criminal behaviors. In fact, Gottfredson and Hirschi's (1990) self-control theory offers low self-control an explanation as to why offenders commit crime/delinquency. By understanding why offenders commit illegal acts, researchers can develop programs using CBT to control or change these characteristics of offenders. The following sections examine the three concepts to be measured by the present study to explore why they have such an impact on delinquency and criminality.

Self-Control

An influential factor that is thought to impact most offenders is low self-control. In the early 1990s, two influential criminologists, Gottfredsson and Hirschi hypothesized that low self-control produces and heightens the chances of criminal involvement (Williams & McShane, 2003). According to Gottfredsson and Hirschi (1990), low self-control develops from an early age and remains present throughout adulthood. Central to this theory is the thought that conditions within the family significantly increase the chances of a child acquiring low self-control. If a child's parent(s) participates in criminality, there is a greater chance the child will also engage in criminality as well as develop low self-control. A larger family can contribute to a child's level of self-control because the atmosphere may be unstructured and the child may not receive the proper attention required to enforce the societal norms of right and wrong (Akers & Sellers, 2004). In addition, a single parent household appears to contribute to the development of low self-control within a child. This is because the parent no longer has the capability to ensure

proper supervision because they are working to support the household (Williams & McShane, 2003). These specific factors combine to enhance the probability of deviant behavior occurring. When a child disobeys and the parent(s) fail to supervise and recognize the deviant behavior, the child suffers because the parent has unsuccessfully punished the child for the negative conduct. Therefore, the abnormal behavior goes unnoticed and the child continues the deviant behavior without hindrance. This process is identifiable by the term, dysfunctional socialization, where the child's level of self-control develops abnormally because the parent(s) failed to stop negative behavioral patterns effectively through their parenting (Williams & McShane, 2003).

If such behavior continues to go unrecognized, the child ultimately develops low self-control distinguished by certain characteristics (Williams & McShane, 2003). The child may often refrain from communication and engage in physical violence as a solution to their problems. The individual may also take more frequent risks and act impulsively without thinking through a situation. Low self-control also contributes to a person failing to identify and/or pursue short-term goals and the individual rarely thinks about the consequences of their actions since their only focus is immediate gratification. The individual may lack the capability to have compassion for others and their feelings often create insensitivity in all aspects of their personal life therefore contributing to less empathy for others. The behavioral deficiencies of the individual possessing low self-control can affect multiple areas of their life (Williams & McShane, 2003). The person then cannot conform to societal norms therefore creating failure within social environments.

As the person continues to experience failure as an outcome of low self-control, negative peer associations develop and other positive relationships diminish. The atmosphere is then favorable for a person to engage in crime/delinquency. Although these factors contribute to

crime, they are not a necessary requirement for crime to occur but merely support deviance. The possibility of a person engaging in criminal behavior increases or decreases depending on the criminal opportunities present within their life. The person continuously possesses low self-control and the occurrence of criminal behavior depends on the existing criminal opportunities. People encompassing low self-control always have a higher risk to become deviant (Akers & Sellers, 2004). Gottfredsson and Hirschi's (1990) self-control theory proposes stability on a person's level of low self-control. If an individual develops low self-control during the early stages of life, the trait will remain constant and the person will always identify with low self-control even during adulthood (Akers & Sellers, 2004).

Sampson and Laub (1993) also attempted to describe criminality through certain sociological factors that are present during childhood through their age-graded theory. They assumed juvenile delinquency occurred because the family structure and immediate environment of a child were not effective in terminating abnormal behavior. The characteristics were more conducive for deviance to occur and therefore affected other aspects of the child's life increasing the propensity for delinquent behavior. Unlike Gottfredson and Hirschi (1990), Sampson and Laub (1993) believed that an adult who engaged in crime could change their behavior and conform to society. The pattern of criminal behavior during adulthood is not stable and can cease when social bonds are strong. If the social bonds are present and remain strong, the adult conforms to societal norms and changes their once abnormal behavior to a law abiding lifestyle. Sampson and Laub's (1993, as cited in Williams & McShane, 2003) age-graded theory therefore represents optimism for criminologists to develop programs that potentially alter an offender's level of self-control.

Self- Control and Aggressiveness

Gottfredson and Hirschi (1990) stated that juveniles encompassing low self-control often engage in violence more frequently than those that do not. R.J. Herrnstein (1995) also analyzed the traits of offenders, which serve as a catalyst for crime to occur, and attested that specific criminogenic factors may predict crime, such as aggressiveness. Herrnstein also studied juveniles to determine which factors were most prevalent amongst juvenile delinquents. Herrnstein mentioned The Cambridge Study of Delinquent Development in 1961-1962, which included a survey of 411 boys researched by West, Farrington and colleagues (1993, as cited in Herrnstein, 1995). The researchers followed the participants until the age of 32 to determine if the specific factors found in adolescence affected their criminal behavior in the future. During the study, West, Farrington and colleagues analyzed specific behavioral traits to examine whether any of the traits were more prevalent amongst juveniles who engaged in delinquency. Their findings suggested that there were certain traits that ultimately led the juveniles to crime in adulthood. The data illustrated that a small percentage of the sample who did become chronic offenders were five times more likely to have received a rating of aggressiveness during the original study. The research concluded that behavioral traits, such as aggressiveness, do serve as instigators for future criminal behavior (Herrnstein, 1995).

Jean Hellwege (1998) supports the thought that aggressiveness leads to criminality. Hellwege specifically discussed juveniles and their propensity for violence. In the late 1980s research had shown that juvenile violence was on the increase with the arrest rates for juvenile violent offenses rising over 50% during that time period (Hellwege, 1998). Sanctions provided for violent juvenile offenders prove problematic because simply restraining their movement within a detention center may not prevent their violent behavior in the future. Barry Feld, a law

professor at the University of Minnesota, stated, “There’s no evidence that incarceration policies have any appreciable effect on crime rates. If they did, since we’ve tripled our incarceration rate in the last decade and a half, we should be in a crime-free environment. And we’re not” (Hellwege, 1998, pg. 111). Criminologists have further explored the criminogenic traits of offenders to establish treatment regimens that will aid an individual in refraining from crime.

The concept of self-control intrigues psychologists because the amount of self-control a person encompasses can influence their violent behavior. By interpreting the connection between an individual’s level of self-control and violence, psychologists can unite with criminologists and effectively produce a CBT program that decreases violence amongst juvenile offenders. If researchers accurately determine the relationship, agencies can develop rehabilitative programs that adapt to the needs of offenders and subsequently alter their level of self-control.

McGuire (1998) specifically evaluated a study, which determined the levels of self-control and aggression that the offenders possessed. The researchers gathered data through various questionnaires and interviews assessing each offender’s ability to control their aggression. McGuire mentioned one young offender in particular to demonstrate the relationship between aggression and self-control. Based on the questionnaires and interviews, the individual scored amongst the highest percentiles related to hostility when compared to other participants. The young offender endured community supervision and rehabilitative programs aimed to control his anger issues. Consequently, the juvenile remained compliant and did not resume any violent or delinquent behavior after an 18-month period (McGuire, 1998). McGuire’s article suggests that rehabilitative programs, which target an offender’s cognitive functions, can ultimately alter their levels of self-control and aggression.

As previously mentioned, an offender's level of self-control can greatly influence their involvement in criminal activity. While this is the case, even once an individual has low self-control, certain cognitive functions can be learned by the offender to gain self-control and refrain from criminality (Sampson & Laub, 1993). Gottfredson and Hirschi (1990) examined low self-control and developed possible explanations as to how a person actually obtains low self-control at an early age. Sampson and Laub (1993) concurred that low self-control develops during childhood but, contrary to Gottfredson and Hirschi, they believe that an individual can alter their level of self-control by gaining stronger bonds within their personal lives. Several research studies illustrated change within offenders encompassing low self-control only after the offenders completed rigorous rehabilitation programs (McGuire, 1998; Herrnstein, 1995; Muris, Meesters, Vincken, & Eijkelenboom, 2005; Paparozzi & Gendreau, 2005). The following section examines research exploring empathy among delinquent and criminal offenders.

Empathy

Research suggests that offenders typically lack empathy, which can lead one to victimize others without realizing the pain and discomfort resulting from the crime. Grant, Skilling and Rice (2001) examined the characteristics of psychopaths and concluded that individuals encompassing attributes such as lack of concern for others, aggressive personalities, and impulsivity, have been labeled as some of the most violent and frequent offenders. Grant and colleagues define the following as one characteristic of psychopaths, "a general lack of emotional attachment or concern for others" which closely identifies with the lack of empathy within offenders (Grant, Skilling, & Rice, 2001, pg. 197-198). Since researchers described psychopaths as violent offenders, criminal justice agencies aim to develop rehabilitative programs for offenders that possess those traits to deter them from victimizing others in the

future. Hare (1992, as cited in Grant, Skilling & Rice, 2001) suggested that psychopaths should engage in treatment that teaches the offenders behavioral traits that promote pro-social attitudes and ways to deal with their conflict in a more positive way. Hare also enforced the notion that psychopaths were in need of CBT programs to help them change their violent nature.

Fischette (2004) mentioned that emotions impact a person's behavior and reactions. If people possess a distorted thought process, they are unable to determine the appropriate methods to deal with others. This may explain the correlation between the lack of empathy and the decision to commit crime. If an individual lacks the ability or desire to understand how their actions will affect others, they are less likely to control themselves. Millon and colleagues (1998, as cited in Fischette, 2004) attest that being a psychopath greatly influences a person's ability to commit crime. Therefore deterrence methods aimed to control a psychopath's beliefs are necessary. While all of the research discussed above relates specifically to psychopaths, it is also maintained that the ability to victimize others, whether in a psychopathic state or not, is a common attribute of criminals. If programs were able to assist offenders in gaining empathy and understanding for the feelings of others, perhaps future victimization would be curtailed. The final concept measured by this study in terms of change through CBT is problem-solving ability. The following section discusses the research that has been conducted and what is known about the relationship between problem-solving and criminal behavior.

Problem-Solving Abilities

Brezina (2000) declared that individuals who lack appropriate problem-solving abilities have an increased chance of becoming involved in criminality in the future. Community supervision programs have implemented rehabilitative components aimed towards enhancing an offender's problem-solving abilities. These programs were constructed to incorporate certain

strategies that influence a person's ability to solve problems without conflict. By ensuring the offenders learn and apply the appropriate techniques to solve problems effectively, criminologists hoped to decrease recidivism.

Campbell (1995) evaluated a cognitive-behavioral intervention program for at-risk adolescents, The BreakAway Company, which was a twelve-week program. The program integrated several cognitive functions that promoted positive thinking patterns within the youth. Throughout the twelve-week program, the youths engaged in role-playing situations that challenged their problem-solving abilities and encouraged them to develop strategies to avoid conflict and resort to problem-solving. Campbell (1995) interviewed the professionals involved in the program and several people who spent time with the at-risk youth often to accurately determine if the adolescents developed appropriate problem-solving abilities based on their observations. During Campbell's collaborated effort to retrieve information from various observers, the study determined that every participant in the program had improved according to the observer's assessments. The evaluation also included several statements from the participants disclosing their experience in the program and affirmations stating that they learned appropriate skills to avoid conflict through the strategies learned from The BreakAway Company program.

Brezina (2000) confirmed that offenders might lack in problem-solving skills and continue to involve themselves in situations that create more conflict within their disarrayed lives. Criminologists evolved the realm of community supervision and developed programs that help offenders improve their problem-solving abilities. Campbell (2005) reinforced the implementation of programs that improve offender's problem-solving abilities. While it is important to understand how CBT impacts the above discussed concepts it is also important to

note why CBT is useful to the criminal justice system. As noted before, if offenders who participate in CBT are able to change their levels of self-control, empathy, and problem-solving skills, among other things, then they should be less likely to recidivate back into the system. The following section examines this further.

Cognitive Behavioral Therapy and Recidivism

Criminal justice agencies who use intensive supervision programs incorporating CBT aim to rehabilitate offenders so that they do not reoffend. Lipsey, Chapman and Landenberger (2001) conducted an extensive review of studies that evaluated CBT programs and recidivism after the completion of the program. Lipsey and colleagues determined that the CBT programs under study proved effective in regards to lowering recidivism. Wilson, Allen and MacKenzie (2000, as cited in Lipsey, Chapman & Landenberger, 2001) conducted a meta-analysis of CBT programs and found that the majority of CBT programs resulted in positive results. Furthermore, Wilson and colleagues concluded that CBT programs reduced recidivism by 20%-30% when compared to a control group that did not receive CBT treatment. Based on these results, CBT programs seem to be effective in altering an offender's pro-criminal attitudes and thinking patterns therefore reducing the chance they will recidivate once released from supervision.

Conclusion

The research discussed throughout Chapter 2 examined the significance between criminality and the three variables, self-control, empathy and problem-solving abilities. The present study helps to determine if CBT programs are effective in changing an offender's level of self-control, empathy and problem-solving abilities. Criminal justice agencies have looked to rehabilitative programs in order to reduce recidivism and assist offenders in becoming law-abiding citizens. Some researchers have confirmed the correlation between the variables

analyzed and criminality while others have examined the effectiveness of CBT programs. To successfully reduce recidivism, it seems the criminal justice system must implement rehabilitative programs that promote change within an offender and deter them from future criminality. The following Chapter introduces the methodology used for the present study, which analyzed the Colorado-based CBT program, Reasoning and Rehabilitation, through the three variables, self-control, empathy and problem-solving and examined the recidivism of those who participated in the program.

CHAPTER 3

METHODOLOGY

The present study answered the following research questions, which determined the effectiveness of the cognitive behavioral therapy [CBT] program, Reasoning and Rehabilitation, in effecting change in the participants regarding self-control, empathy and problem-solving abilities.

RQ1. Is there a difference between the pre- and post-measures of self-control as measured by the following four statements?

- a.) When you are angry with someone, you often take it out on anybody who happens to be around.
- b.) You are usually calm and not easily upset.
- c.) You can inform people that you are irritated or angry without losing your temper.
- d.) When you get angry, you often stay angry for hours.

RQ2. Is there a difference between the pre- and post-measures of problem-solving abilities as measured by the following seven statements?

- a.) You have the ability to solve most problems, even when at first no solution is obvious.
- b.) You don't like to work on a problem unless you can expect to come out with a clear-cut solution.
- c.) Thinking of similar past problems does not help much when you are trying to solve a new problem.

- d.) Some times you get so charged up emotionally that you can't think of many ways of dealing with a problem you face.
- e.) After you have solved a problem, you spend some time trying to figure out what went right or wrong.
- f.) When faced with a problem, you usually look at what sort of outside things in your environment may be adding to the problem.
- g.) You have an organized way to compare choices and make decisions.

RQ3. Is there a difference between the pre- and post-measures of empathy as measured by the three following statements?

- a.) It's okay for you to take and keep things that people are careless enough to leave laying around.
- b.) It's okay to cheat when you feel others are being unfair to you.
- c.) Taking things from supermarkets and department stores doesn't hurt anyone.

RQ4. Is there a significant difference in recidivism between those who participated in the CBT program and those who did not?

The Data Utilized

The present study utilized secondary data analysis. The original researchers, Pullen and English (1995), oversaw data collection. Between the years of 1994-1995, the original researchers conducted pre- and post-tests using questionnaires and interviews with probation officers and juvenile probationers before and after completing the CBT program. The original researchers also administered interviews with the probation officers six months after the completion of the program to determine if the juveniles recidivated. The 20 juvenile offenders in the experimental group were randomly assigned to complete the Colorado based CBT program,

Reasoning and Rehabilitation. A juvenile intensive supervision officer facilitated the CBT program, which was comprised of 35 sessions each lasting between 90-120 minutes. The sessions aimed to increase the levels of self-control and empathy among the juvenile participants as well as to increase problem-solving skills so that they would deal with situations more effectively. The instructor used different techniques to teach the juveniles these skills, such as interactive discussions and role-playing exercises. As for the control group, the 20 offenders were randomly assigned to the juvenile intensive supervision program [JISP] but did not participate in the CBT program.

For both groups, pre- and post-test data was collected through a self-enumerated questionnaire based on a five-point Likert scale. Additionally, Pullen and English used administrative records to gather background information about the sample. The Colorado State Judicial Department's automated database, which contained the intake and termination files, provided the researchers with additional background and juvenile probation data. The data obtained provided the original researchers information about the JISP intakes. All the participants within the experimental and control group were male. The experimental group contained more juveniles who had committed property offenses than violent offenses and only 5% of the juveniles had committed violent offenses with weapons. The control group also had more property offenders but contained 40% violent offenders, which was 20% more than the experimental group. All JISP intakes also consisted of more property offenses than violent offenses.

Once Pullen and English had completed their work with the data, the dataset was made publicly available on the Inter-University Consortium for Political and Social Research [ICPSR] Website. The original researchers de-identified the dataset prior to making it publicly available

so that no identifying information is included in the dataset used for this analysis. The data was found for the present study by using the World Wide Web to access the ICPSR database. By utilizing the ICPSR search tool, the evaluation of the Juvenile Intensive Supervision Program, Reasoning and Rehabilitation, was found by using the keywords, “intensive supervision programs.” These keywords were chosen as it was previously known that CBT programs are likely to occur within intensive supervision programs. After reviewing the original researchers’ evaluation and the variables included, the data was thought to be appropriate for the present study. Therefore the data was downloaded from the ICPSR Website and approval was sought from the University of North Texas Institutional Review Board [see Appendix A]. The author utilized the statistical software, Statistical Package for the Social Sciences [SPSS] to evaluate the variables, self-control, empathy, problem-solving abilities, and recidivism from the pre- and post-test data collected by the original researchers.

Variables to be Analyzed

The present study utilized data acquired from a modified version of a questionnaire originally developed by Johnson and Hunter (1992) for their evaluation of a specialized drug offender program. While this questionnaire was developed in the early 1990s, the statements included have been noted by other authors as relevant and valid measures of the incorporated concepts, specifically self-control, empathy, and problem-solving abilities (Johnson & Hunter, 1992; Gaes, Flanagan, Motiuk, Stewart, 1999; Voorhis, Spruance, Ritchey, Listwan, Seabrook, 2004). The pre- and post-questionnaires contained 70 items regarding behavioral patterns measuring self-control, empathy and problem-solving abilities, among other concepts. The original researchers previously coded the variables measured from the pre- and post-test data from both the control and experimental group. The questions offered the respondents answers

based on a five-point Likert scale. More specifically, the answers were coded as 1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; and 5=strongly agree. Recidivism was classified as receiving a new charge within the six months following completion of the CBT program and was coded as 0=no and 1=yes. A table presenting the variables used for analysis and their coding structure can be found in Appendix B.

Plan of Analysis

Descriptive and bivariate analyses were utilized to examine the data. Findings from the analyses were used to describe the data and to determine if there were differences in the scores between the pre- and post-tests on the measures of self-control, empathy, and problem-solving ability. Further, the original researchers conducted interviews six months after the completion of the program to determine if the participants recidivated. Analyses revealed whether there were differences between the experimental group and control group as related to recidivism.

This evaluation aimed to understand the relationship between delinquency, recidivism, and the variables, self-control, empathy and problem-solving abilities. If these variables actually increase the probability of delinquent behavior, then participants who showed a positive change in their pre-and post-tests measures, should receive no new charges and those whom recidivated should show low self-control, a lack of empathy and problem-solving abilities. Chapter 4 presents the findings of the present study. Even though the original researchers collected the data cautiously, the results of the present study may not accurately reflect the effectiveness of the CBT program, therefore an examination of certain limitations faced by the present study is discussed.

CHAPTER 4

ANALYSIS OF RESEARCH FINDINGS

This chapter examines and discusses the findings from the descriptive and bivariate analyses used to answer the research questions posed by the present study. For the first three research questions, descriptive analyses were used to see whether there were differences between the pre- and post-measures of self-control, empathy, and problem solving abilities. Differences in respondent answers to each statement used to measure these concepts on the pre- and post-questionnaires were examined. It was hypothesized that the juveniles who participated in the cognitive behavioral therapy [CBT] program would adjust their responses based on what they learned in the program. Therefore, they would show greater levels of self-control, empathy, and problem solving abilities as measured by the statements on the questionnaire. For the fourth research question, a Pearson's chi-square test of independence was used to determine whether there existed a significant difference between the experimental and control groups as to whether they recidivated. A chi-square analysis was appropriate to answer the fourth research question because the analysis measured two variables and allowed the determination of whether the control or experimental group recidivated at significantly different frequencies (Salkind, 2008). It was expected that the experimental group would recidivate significantly less than the control group seeing as they received the cognitive behavioral treatment. The following sections examines the findings for each research question and their individual sub-parts. Following, the present study's limitations are discussed.

Analysis of Research Questions

Research Question 1

The hypothesis of Research Question 1 assumed that the participants assigned to the experimental group who completed the CBT program would increase their level of self-control due to the skills they acquired through the program. Descriptive analyses were utilized to discover the differences between the pre- and post-test measures of self-control. Table 1 illustrates the descriptive analyses of the variable self-control as measured by four separate statements on the questionnaire. The abbreviations associated with Table 1 and the remaining tables in this chapter are noted as follows: (a) Group = either the experimental or control group; (b) Variable = the pre- or post-test measures; (c) SA = strongly agree; (d) A = agree; (e) N = neither agree nor disagree; (f) D = disagree; (g) SD = strongly disagree; (h) U = unknown; and (i) Total = total participants.

Table 1 displays the differences for the experimental and control groups between the pre- and post-test measures of self-control. The analysis provides the number of responses that each pre- and post-test question prompted from the control and experimental groups. The findings allowed the examination of each pre- and post-test question separately to determine if the experimental group changed their negative thinking patterns and increased their level of self-control as measured by the statements on the questionnaire.

Table 1

Pre- and Post-Test Measures of Self-Control by Assigned Group

Group	Variable	SA	A	N	D	SD	U	Total
Exp	PRE018	1	4	4	6	5	0	40
Control		1	4	5	5	5	0	
Exp	POST018	0	2	5	6	5	2	40
Control		0	1	2	4	6	7	
Exp	PRE029	1	0	8	8	3	0	40
Control		1	1	4	9	5	0	
Exp	POST029	3	9	3	2	1	2	40
Control		2	5	5	1	0	7	
Exp	PRE030	1	3	1	12	3	0	40
Control		1	0	3	12	4	0	
Exp	POST030	5	8	1	3	1	2	40
Control		1	10	0	2	0	7	
Exp	PRE031	3	4	3	10	0	0	40
Control		0	6	1	13	0	0	
Exp	POST031	1	4	3	7	3	2	40
Control		0	0	3	10	0	7	

An examination of the first statement measuring self-control (018: When you are angry with someone, you often take it out on anybody who happens to be around.) revealed that the participants who completed the CBT program showed a slight positive change. For the pre-test measure completed by the experimental group, one person strongly agreed with the statement, four agreed, four were neutral, six disagreed and five strongly disagreed. For the post-test measure of this statement, not one of the experimental group members strongly agreed with the statement, only two agreed, five were neutral, six disagreed, and five strongly disagreed with the statement. While there remained agreement with the statement in the post-measure, it was less frequent than in the pre-measure.

The second statement on the questionnaire measuring self-control, (029: You are usually calm and not easily upset.) also resulted a positive change among the experimental group. One respondent strongly agreed with the statement, zero agreed, eight were neutral, eight disagreed,

and three strongly disagreed with the statement. For the post-test measures of this statement, three strongly agreed, nine agree, three were neutral, two disagreed, and one strongly disagreed. These results indicate that the juveniles in the experimental group acquired new skills to deal with their temper and possibly felt calmer after completing the CBT program.

An analysis of the third statement measuring self-control (030: You can inform people that you are irritated or angry without losing your temper.) showed a tremendous difference for the experimental group between the pre- and post-measures. For the pre-test measures, one respondent strongly agreed, three agreed, one was neutral, twelve disagreed, and three strongly agreed. For the post-test measures, five respondents strongly agreed, eight agreed, one was neutral, three disagreed, and one strongly disagreed. Even though a few experimental group participants still disagreed, it was far less frequent than in the pre-test measure.

An analysis of the final statement measuring self-control, (031: When you get angry, you often stay angry for hours.) revealed no real change for the experimental group respondents between the pre- and post-measures. For the pre-measure, three experimental group respondents strongly agreed, four agreed, three were neutral, ten disagreed, and zero strongly disagreed. For the post-test measures, one respondent strongly agreed, four agreed, three were neutral, seven disagreed, and three strongly disagreed. The CBT program would expect that more participants would strongly disagree or disagree with the statement; however this was not the case.

While reviewing the results from the four statements measuring self-control, it appears that many of the juveniles changed their negative thinking patterns and their behavior as evidenced by the pre- and post-test data. Overall, the findings found in Table 1 moderately supported the hypothesis for Research Question 1. The juveniles in the experimental group may have increased their level of self-control as measured by the pre- and post-test statements. For

the majority of the statements, there was a positive change in the experimental group respondents as indicated by respondent's answers on the post-questionnaire completed after participating in the CBT program.

Research Question 2

Table 2 presents the pre- and post-test data regarding how the juveniles responded to questionnaire items measuring problem-solving abilities. The hypothesis for Research Question 2 stated that the juveniles who participated in the CBT program would increase their problem-solving abilities due to the skills learned in the CBT program. The following paragraphs provide an explanation of the findings to determine whether this hypothesis was supported.

Table 2

Pre- and Post-test Measures of Problem-Solving Abilities by Assigned Group

Group	Variable	SA	A	N	D	SD	U	Total
Exp	PRE038	0	3	7	7	3	0	40
Control		0	1	4	14	1	0	
Exp	POST038	1	7	5	5	0	2	40
Control		0	9	3	1	0	7	
Exp	PRE039	0	10	3	6	1	0	40
Control		0	9	3	8	0	0	
Exp	POST039	0	8	6	4	0	2	40
Control		1	3	5	4	0	7	
Exp	PRE040	4	7	2	7	0	0	40
Control		4	8	4	4	0	0	
Exp	POST040	1	7	1	6	3	2	40
Control		0	8	1	4	0	7	
Exp	PRE041	2	7	6	3	2	0	40
Control		1	9	4	6	0	0	
Exp	POST041	1	5	5	7	0	2	40
Control		0	4	4	5	0	7	
Exp	PRE042	0	4	4	11	1	0	40
Control		0	0	3	15	2	0	
Exp	POST042	1	9	6	2	0	2	40
Control		2	6	3	2	0	7	

(table continued)

Pre- and Post-test Measures of Problem-Solving Abilities by Assigned Group (continued).

Group	Variable	SA	A	N	D	SD	U	Total
Exp	PRE043	0	4	4	11	1	0	40
Control		0	0	6	13	1	0	
Exp	POST043	1	8	6	3	0	2	40
Control		2	6	3	2	0	7	
Exp	PRE043A	0	6	5	9	0	0	40
Control		0	3	5	12	0	0	
Exp	POST043A	1	11	2	4	0	2	40
Control		2	7	2	2	0	7	

The first item on the pre- and post-questionnaire measuring problem solving abilities (038: You have the ability to solve most problems, even when at first no solution is obvious.) indicated a slight positive change for the experimental group in the respondent's ability to solve most problems without an obvious solution. For the pre-test measures, not one experimental group respondent strongly agreed with the statement, three agreed, seven were neutral, seven disagreed, and three strongly disagreed. For the post-test measures, one respondent strongly agreed, seven agreed, five were neutral, five disagreed, and not one participant in the experimental group strongly disagreed with the statement. During the post-questionnaire completed by the control group, the responses also appeared to have a positive change when compared to the control group's pre-test measures. Although not associated with the CBT, perhaps the juveniles learned these skills through participation in the juvenile intensive supervision program [JISP].

The second statement measuring problem-solving abilities, (039: You don't like to work on a problem unless you can expect to come out with a clear-cut solution.) revealed moderate changes in the respondent's problem-solving abilities. An analysis of the experimental group's pre-measures showed that not one participant strongly agreed with the statement, ten agreed,

three were neutral, six disagreed, and one strongly disagreed. For the post-measures, not one respondent strongly agreed with the statement, eight agreed, six were neutral, four disagreed, and zero strongly disagreed. Upon closer examination, the control group also noted moderate changes between pre- and post-test measures. Nine juveniles within the control group agreed with the statement during the pre-test but only three agreed during the post-test, which could again imply an increase in problem-solving abilities simply due to JISP.

An analysis of the third statement measuring problem-solving abilities (040: Thinking of similar past problems does not help much when you are trying to solve a new problem.) revealed that on the pre-questionnaire four experimental group participants strongly agreed with the statement, seven agreed, two were neutral, seven disagreed, and zero strongly agreed. For the post-measures, only one participant strongly agreed with the statement, seven agreed, one was neutral, six disagreed, and three strongly disagreed. Because thinking of the response to similar past problems can help one in making present decisions, it was hypothesized that post-measures would show an increase in disagreement with this statement. Findings indicated a reasonable amount of change occurred and supported the hypothesis.

An analysis of the fourth statement measuring problem-solving abilities (041: Sometimes you get so charged up emotionally that you can't think of many ways of dealing with a problem you face.) showed that for the pre-measures two experimental group participants strongly agreed, seven agreed, six were neutral, three disagreed, and two strongly disagreed. For the post-test measures, one participant strongly agreed, five agreed, five were neutral, seven disagreed, and zero strongly disagreed. Based on these results, one can see that a slight change occurred. While no experimental group respondent strongly disagreed on the post-measure, there was an increase

in the number of respondent's who disagreed between the pre- and post-measures from three to seven.

Results for the fifth statement measuring problem solving abilities (042: After you have solved a problem, you spend some time trying to figure out what went right or wrong.) revealed a positive change in the experimental group's responses. For the experimental group's pre-measures, not one participant strongly agreed with the statement, four agreed, four were neutral, eleven disagreed, and one strongly disagreed. For the post-measures, one participant strongly agreed, nine agreed, six were neutral, two disagreed, and zero strongly disagreed. Based on these results, it appears that the participants now spend some time trying to figure out what went wrong or right after they solved a problem. It also appeared that the control group positively changed their problem-solving abilities as evidenced by the pre- and post-test data. During the pre-measures completed by the control group, not one juvenile strongly agreed or agreed but during the post-measures, two control group participants strongly agreed and six agreed with the statement.

The sixth statement (043: When faced with a problem, you usually look at what sort of outside things in your environment may be adding to the problem.) prompted a variety of responses from the experimental group. For the pre-measures, not one participant strongly agreed with the statement, four agreed, four were neutral, eleven disagreed, and one strongly disagreed. For the post-measures, one experimental group participant strongly agreed, eight agreed, six were neutral, three disagreed, and zero strongly disagreed. Judging by these responses, the experimental group experienced positive changes most likely due to the techniques learned during the CBT program.

The final statement measuring problem-solving abilities (043A: You have an organized way to compare choices and make decisions.) revealed a positive change in the experimental group's responses. For the pre-measures, not one of the experimental group participants strongly agreed with the statement, six agreed, five were neutral, nine disagreed, and zero strongly disagreed. For the post-measures, one experimental group participant strongly agreed with the statement, eleven agreed, two were neutral, four disagreed, and zero strongly disagreed. The hypothesis for the second research question was again supported by an increase in agreement from six to twelve experimental group participants between the pre- and post-measures. While reviewing the results from the four statements measuring problem-solving, it appears that many of the juveniles increased their problem-solving as evidenced by the pre- and post-test data. Overall, the findings found in Table 2 reasonably support the hypothesis for Research Question 2. For the majority of the statements, there was a positive change in the experimental group respondents as indicated by respondent's answers on the post-questionnaire completed after participating in the CBT program. The following section examines the participant's responses to statements measuring empathy. It was expected that the experimental group members would show an increase in empathy based on what they learned in the CBT program.

Research Question 3

Table 3 displays the differences for the experimental and control group on the pre- and post-measures of empathy. The hypothesis of Research Question 3 stated that after the completing the CBT program, participants in the experimental group would increase their level of empathy thus enhancing their ability to understand the feelings of others. If offenders increase their ability to understand the feelings of others, they may be less inclined to victimize others.

Table 3

Pre- and Post-test Measures of Empathy by Assigned Groups

Group	Variable	SA	A	N	D	SD	U	Total
Exp	PRE055	2	8	4	3	2	1	40
Control		0	15	3	1	1	0	
Exp	POST055	1	6	5	6	0	2	40
Control		0	1	1	9	2	7	
Exp	PRE056	1	6	4	7	1	1	40
Control		2	9	3	5	1	0	
Exp	POST056	2	5	3	7	1	2	40
Control		0	4	2	6	1	7	
Exp	PRE057	1	14	3	1	0	1	40
Control		5	11	3	1	0	0	
Exp	POST057	0	2	3	10	3	2	40
Control		0	2	0	8	3	7	

The first statement measuring empathy (055: It's okay for you to take and keep things that people are careless enough to leave laying around.) produced conflicting results. For the pre-measure completed by the experimental group, two respondents strongly agreed with the statement, eight agreed, four were neutral, three disagreed, and two strongly disagreed. For the post-measures, one experimental group respondent strongly agreed, six agreed, five were neutral, six disagreed, and zero strongly disagreed. It was hypothesized that more participants would strongly disagree or disagree with this statement during post-test measurements, however, two respondents strongly disagreed during the pre-test and not one participant strongly disagreed during the post-test. While this may seem negative, there was also a positive finding in that only three respondents disagreed with the statement during the pre-test but six respondents disagreed during the post-test. Interestingly, the control group also appeared to have a positive change their level of empathy as supported by the pre- and post-test measurements. For the pre-test

measurements completed by the control group, only one participant disagreed with the statement but during the post-test, nine disagreed.

The second statement measuring empathy (056: Its okay to cheat when you feel others are being unfair to you.) failed to produce a change regarding the participant's level of empathy. For the pre-test measures completed by the experimental group, one respondent strongly agreed with the statement, six agreed, four were neutral, seven disagreed, and one strongly disagreed. For the post-test measures, two respondents strongly agreed with the statement, five agreed, three were neutral, seven disagreed, and one strongly disagreed. Based on the research hypothesis for this research question, it would be expected that more respondents would strongly disagree or disagree with this statement during the post-test measurements, however, this was not the case.

The final statement measuring empathy on the pre- and post-questionnaires (057: Taking things from supermarkets and department stores doesn't hurt anyone.) resulted in a positive change in respondent answers. For the pre-test measures completed by the experimental group, one respondent strongly agreed with the statement, fourteen agreed, three were neutral, one disagreed, and not one participant strongly disagreed. For the post-test measures, not one experimental group respondent strongly agreed, two agreed, three were neutral, ten disagreed, and three strongly disagreed. This data suggests that after completing the CBT program the majority of participants in the experimental group changed their answers from agreement to disagreement with this statement. Therefore, it seems that they learned from the CBT program that taking things from supermarkets and department stores does hurt someone. The control group also experienced a positive change as supported by the pre- and post-test data. During the pre-test measures completed by the control group, not one participant disagreed or strongly disagreed but during the post-test measures, three disagreed, and seven strongly disagreed

therefore representing a significant positive change. Table 4 summarizes the findings from the first three research questions measuring self-control, empathy and problem-solving abilities. Noted in the table is the percentage of participants in each group who either agreed or disagreed with the statement as expected after the completion of the CBT program. To determine the percentages, the author added the respondents who strongly agreed/agreed or strongly disagreed/disagreed, then divided the sum by the number of participants in the respective group.

Table 4

Summary of Findings for Research Questions 1-3

Survey Item	Experimental		Control	
	Pre	Post	Pre	Post
Self-Control Measures				
When you are angry with someone, you often take it out on anybody who happens to be around. (-)	55%	55%	50%	50%
You are usually calm and not easily upset. (+)	5%	60%	10%	35%
You can inform people that you are irritated or angry without losing your temper. (+)	20%	65%	5%	55%
When you get angry, you often stay angry for hours. (-)	50%	50%	65%	50%
Problem-Solving Abilities Measures				
You have the ability to solve most problems, even when at first no solution is obvious. (+)	15%	40%	5%	45%
You don't like to work on a problem unless you can expect to come out with a clear-cut solution. (-)	35%	20%	40%	20%
Thinking of similar past problems does not help much with you are trying to solve a new problem. (-)	35%	45%	20%	20%
Sometimes you get so charged up emotionally that you can't think of many ways of dealing with a problem you face. (-)	25%	35%	30%	25%
After you have solved a problem, you spend some time trying to figure out what went right or wrong. (+)	20%	50%	0%	40%
When faced with a problem, you usually look at what sort of outside things in your environment may be adding to the problem. (+)	20%	45%	0%	40%
You have an organized way to compare choices and make decisions. (+)	30%	60%	15%	45%
Empathy Measures				
It's okay for you to take and keep things that people are careless enough to leave laying around. (-)	25%	30%	10%	55%
It's okay to cheat when you feel others are being unfair to you. (-)	40%	40%	30%	35%
Taking things from supermarkets and department stores doesn't hurt anyone. (-)	5%	65%	5%	55%

(+) = agreement expected; (-) = disagreement expected

After reviewing the results from the three statements measuring empathy, the data suggested that the participants did not increase their level of empathy positively. Only one statement measuring empathy produced positive results suggesting that the juveniles increased their level of empathy. For the majority of the statements, there was little or no change noted in the experimental group respondents as indicated by respondent's answers on the post-questionnaire completed after participating in the CBT program. The following section analyzes the recidivism rates of the control and experimental group.

Research Question 4

The hypothesis of Research Question 4 stated that the juveniles who participated in the CBT program would re-offend less than the juveniles in JISP. The original researchers recorded recidivism six months after the completion of the CBT program, which was measured by an arrest for a new crime. A bivariate chi-square analysis was utilized to examine differences between the experimental group and control group as to whether they recidivated following the CBT program. While it was hypothesized that there would be a significant difference in recidivism between the two groups, results from the Pearson's chi-square test for independence revealed no statistically significant difference ($\chi^2=.143, 1 df, n.s.$). Table 4 identifies the number of participants in each group who recidivated.

Table 5

Chi-Square Results for Group Differences in Recidivism after Treatment

Group	No Recidivism	Recidivism	Total
Experimental	16	4	20
Control	15	5	20

As the reader can see, the experimental group noted only four juveniles that recidivated and sixteen individuals that did not re-offend. Only five delinquents re-offended within the

control group and fifteen did not. This indicates the groups were very similar in their rates of recidivism regardless of who received the treatment. The hypothesis of Research Question 4 expected a considerable difference between the recidivism of the experimental group as compared to the control group. The data does not support a substantial difference therefore the hypothesis was not supported. While there are many interesting findings that have resulted from the present study, it is not without limitations. The following section discusses these limitations and how they may have affected the study.

Limitations to the Present Study

The present study faced a few limitations that should be noted. As secondary data analysis was utilized to answer the research questions, it is important to review the limitations stemming from the original data collection. First, only one specific CBT program facilitated among juveniles on intensive supervision in Colorado was analyzed in this study therefore limiting the generalizability of the findings. Other CBT programs across the nation may entail different methods to alter an offender's thinking patterns, but the present evaluation cannot determine their effectiveness since only results from the Reasoning and Rehabilitation program were analyzed. Following, this data was collected in the mid-1990s and is now ten years old. As there has not been a large amount of research completed in this area, the present study was forced to rely on older data. In addition, this evaluation included juvenile males only and does not contain information about the effectiveness of the Reasoning and Rehabilitation Program amongst adults or females. Since adults and females were not included, it can only be said that the program seems to be effective with a population of juvenile males on intensive supervision in Colorado.

Threats to the reliability and validity of the present study are also present due to problems faced by the original data collection team. For example, attrition rates throughout the evaluation influenced the results as a few of the juveniles failed to complete the pre- and post-test measurements as evidenced by the unknown variables for the pre- and post-test data. Maturation may have also influenced the results because the researchers collected data from juveniles and during the duration of the program, the offenders may have changed their behavior naturally through adolescence. While any change in experimental group respondent answers is attributed to their participation in the CBT program, it could be that the juveniles naturally changed their behavior throughout the program. Further, pre-test bias may have occurred because the juveniles clearly understood the goal of the Reasoning and Rehabilitation Program and their post-test answers may have been influenced because of their knowledge about the expected outcome and their familiarity with the pre-test. Finally, a major limitation faced when using self-report measures is that the participants may not have answered the questions truthfully on the pre- and post-measures, therefore producing inaccurate results. While these limitations exist, the present study does offer a look into the use of CBT among a juvenile offender population and lends support for further use of such programming as positive changes among the participants resulted.

Conclusion

As the findings discussed above revealed, the experimental group participants exhibited positive changes after completing the CBT program as measured by the statements representing the variables self-control, empathy and problem-solving abilities. While this is the case, the bivariate analysis did not reveal a significant statistical difference between the experimental group and the control group as relates to recidivism. The final chapter provides an overview of

these findings and discusses the policy implications and suggestions for future research on this topic.

CHAPTER 5

DISCUSSION

The objective of the present study was to determine if the CBT program, Reasoning and Rehabilitation, increased the participant's levels of self-control, empathy and problem-solving abilities and whether there was a significant difference between the experimental and control groups in terms of recidivism. This chapter provides an overview of the present study's findings and discusses what implications these findings have for the use of cognitive behavioral therapy [CBT] programs among juveniles on intensive supervision. Lastly, this chapter provides suggestions for future research on this topic.

Principle Findings

Descriptive analyses revealed that the CBT program somewhat improved participant's levels of self-control, empathy and problem-solving abilities as measured by the statements included on the questionnaire. More specifically, the pre- and post-test data analyzed for the most part depicted positive changes regarding the juveniles' levels of self-control. Furthermore, measurements based on the statement, "You can inform people that you are irritated or angry without losing your temper," represented a remarkable change between the pre-and post-test measures. The statement suggested that the participants can inform people they are irritated without losing their temper far better than before they completed the CBT program. This could possibly signify a decrease in aggression or that the delinquent's learned pro-social ways of handling potential conflicts. Contrary to this finding, the statement, "When you get angry, you often stay angry for hours," revealed no real change regarding the juvenile's levels of self-control after the CBT program. Overall, however, the CBT program proved successful in changing the offender's level of self-control as measured by the four statements.

The seven statements measuring problem-solving abilities also depicted positive changes. The findings supported the hypothesis that participants in the CBT program would have more problem-solving skills after completing the program. These findings were supported by the pre- and post-test data that measured the offender's problem-solving abilities. The majority of the statements measuring problem-solving abilities mostly revealed moderate increases in the offender's problem-solving abilities after the CBT program. An analyses of the statements, "Thinking of similar past problems does not help much when you are trying to solve a new problem" and "You have an organized way to compare choices and make decisions," both indicated positive changes in the experimental group's responses after completing the CBT program. Judging by these results, it appeared that the participant's problem-solving abilities increased due to the skills learned during the CBT program.

The pre- and post-test data measuring empathy produced contradicting evidence regarding the offender's level of empathy after the CBT program. The statement "It's okay for you to take and keep things that people are careless enough to leave laying around" produced conflicting results because two participants strongly disagreed with the statement during the pre-test and not one respondent strongly disagreed during the post-test. While this may seem negative, there was also a positive finding in that only three respondents disagreed with the statement during the pre-test but six respondents disagreed during the post-test. The second statement measuring empathy, "Its okay to cheat when you feel others are being unfair to you," failed to show a change regarding the participant's level of empathy. The final statement that measured empathy, "Taking things from supermarkets and department stores doesn't hurt anyone," resulted in a positive change in respondent answers. It appeared that they learned from the CBT program that taking things form supermarkets and department stores does hurt

someone. The three statements that measured empathy produced negating results because two of the three statements resulted in little or no change yet one statement produced favorable results and supported the hypothesis.

Interestingly, the recidivism rates were almost identical between the control and the experimental groups and the two groups were not found to be statistically different. Therefore the hypothesis for Research Question 4 was not supported by the findings. The following section examines what the findings indicate for the future use of CBT programs among juvenile delinquent populations.

Suggestions for Future CBT Programs

Rehabilitating offenders can prove difficult but agencies can develop enhanced CBT programs that may act as a successful rehabilitative technique for juvenile offenders. The present study produced encouraging results, and conveyed positive changes regarding the participant's levels of self-control, empathy and problem-solving abilities. Since past research suggests that these specific variables consistently influence an adolescent's delinquent behavior, criminal justice agencies should strive to improve current or future CBT programs for use among juvenile delinquent populations.

For a CBT program to be successful, the facilitators teaching the program should be well educated within the realm of cognitive behavior therapy. A CBT program would be more effective with two instructors for role-play purposes and diversity. Furthermore, the facilitators should be enthusiastic about teaching the CBT program so that the teacher's passion will positively influence the juvenile's learning experience. In addition, the agency should offer extensive training to explain the program's objectives. The instructors should undergo training which explains the curriculum and proper teaching methods. The agency should distribute all

needed materials to avoid any delays in the program's objectives. Such training should not only occur before the program begins but also should occur at least once a year to update the instructors on improved CBT initiatives.

The structure of the CBT program can also affect the learning experience. The program should consist of several weekly sessions to avoid a lengthy delay between lessons. The juveniles may forget the material from previous lessons so the less time between each session would be more adequate. The juveniles may become less involved in the class if it does not seem interesting and entertaining, therefore the curriculum should include an excessive amount of role-playing exercises and interactive discussions. By having the juveniles contribute to the discussions, it increases their participation and allows the offenders to become involved.

The dynamics of the class also play a role on the effectiveness; therefore, the class size should remain relatively small. If the class is large, the teachers may have a difficult time controlling the offender's behavior only making it more challenging to convey the skills in an orderly fashion. Agencies should also consider the demographics of their offenders because the program could extend to Spanish speaking populations if needed. If CBT programs are more widely available to various offender populations, more juveniles could attend the CBT programs. Lastly, the juveniles participating in the CBT program should not be under the influence of drugs and/or alcohol because the substances may limit their ability to function properly and comprehend the material.

Finally, as most relates to the present study, future CBT programs should evaluate the ways in which the program incorporates lessons on self-control, empathy, and problem-solving abilities. As these elements have been found to be important factors impacting juvenile delinquency they should be paid close attention. Additionally, evaluators should ensure that they

ways in which progress is measured among the participating juveniles are valid and reliable measures. Checking the validity of the concepts and replicating the use of the measures will go a long way in ensuring correct evaluation. While this study provides a good start in evaluating the usefulness of CBT programs among juvenile delinquent populations there are a number of issues future researchers should address.

Suggestions for Further Research

Since crime within the United States is costly and problematic, criminal justice agencies enforce sanctions upon offenders to deter future criminality. Because of high recidivism rates and the fact that many of the nation's prisons are currently facing overcrowded conditions, correctional authorities have turned to more rehabilitative sanctions including intensive supervision probation utilizing therapeutic programming. Due to this, CBT programs among correctional populations may become more prevalent. Considering this, it is apparent that criminal justice agencies can benefit from future research on CBT programs. Constructing research projects that evaluate CBT programs can serve as a helpful tool to construct new and improved CBT programs.

The limitations of the present study lead to several suggestions for future research. Future evaluations should consider evaluating diverse populations to assure CBT programs are available and effective among all individuals including females. CBT programs may have to alter their curriculum to equalize the differences between the learning dynamics of males and females. Further, limiting studies to juveniles may generate a more positive outcome when compared to adults because juveniles may be more receptive to changing their pro-criminal attitudes and beliefs. Future researchers should take this into consideration. Since juveniles may

experience maturation during the CBT program, studying adults would compensate for the maturing effect that the juveniles experience naturally.

Researchers should also consider the measurement tools used to determine the effectiveness of CBT programs. Utilizing a measurement tool that previous researchers evaluated for accuracy can prove more reliable. Using several different measurement tools within one study can produce results that are more accurate. Certain tools may have inherent limitations, such as self-report measurements, therefore incorporating several measurements can generate additional methods to analyze the data. Further, since sample size can affect the outcome of the study's results, a larger sample would benefit the evaluation of CBT programs. Since CBT programs evolve within high-risk populations, attrition is problematic. If the sample is larger in the beginning of the program, the study can endure the attrition experienced throughout the evaluation.

In addition, future studies should evaluate several different CBT programs. Certain programs could produce different results due to a secondary influence and not solely based on the effectiveness of the CBT program. By examining several programs, the findings would explore all populations and determine if CBT programs consistently reveal the same results throughout each study.

Conclusion

The present study examined a CBT program within a juvenile intensive supervision program to explore the effectiveness of the program on changing the levels of self-control, empathy, and problem solving abilities among respondents. The outcome suggested that the CBT program, Reasoning and Rehabilitation, somewhat altered the participant's level of self-control and problem-solving abilities. However, the CBT program failed to show an immense

change in the offender's level of empathy or recidivism rates after the completion of the program. The findings from the present study offer insight into the effectiveness of the use of CBT programs among juveniles on intensive supervision. In addition, suggestions were given for improvements in future research based on the limitations endured by the present study. Since rehabilitation is becoming a more viable option for the criminal justice system, CBT programs could be included as a requirement for many sanctions, not just intensive supervision (Clear & Braga, 1995). If this is the case, researchers should remember to periodically examine program effectiveness to ensure they are producing favorable results and in fact reducing future crime and delinquency.

APPENDIX A
RESPONSE FROM THE UNIVERSITY OF NORTH TEXAS
INSTITUTIONAL REVIEW BOARD

October 9, 2007

Stephanie Cain
Department of Criminal Justice
University of North Texas
RE: UNT IRB Review

Dear Ms. Cain,

The role of the UNT Institutional Review Board is limited to reviewing "research" with "human subjects" as those terms are defined in 45 CFR Part 46:

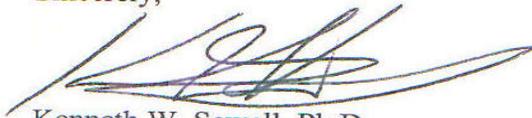
Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. Activities which meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program which is considered research for other purposes.

Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains:

- (1) data through intervention or interaction with the individual, or
- (2) identifiable private information.

Based on the description of your project which you provided to the IRB staff, your proposed review of de-identified data from the Inter-University Consortium for Political and Social Research does not meet the regulatory definition of "human subjects research," and review and approval by the UNT IRB is not required.

Sincerely,



Kenneth W. Sewell, Ph.D.
Chair
Institutional Review Board

KS/sb

APPENDIX B

VARIABLE NAMES, CORRESPONDING STATEMENTS AND CODING

Variable Names	Questionnaire Statement	Variable Coding
PRE018 / POST018	When you are angry with someone, you often take it out on anybody who happens to be around.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE029 / POST029	You are usually calm and not easily upset.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE030 / POST030	You can inform people that you are irritated or angry without losing your temper.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE031 / POST031	When you get angry, you often stay angry for hours.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE038 / POST038	You have the ability to solve most problems, even when at first no solution is obvious.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE039 / POST039	You don't like to work on a problem unless you can expect to come out with a clear-cut solution.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE040 / POST040	Thinking of similar past problems does not help much when you are trying to solve a new problem.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree

PRE041 / POST041	Some times you get so charged up emotionally that you can't think of many ways of dealing with a problem you face.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE042 / POST042	After you have solved a problem, you spend some time trying to figure out what went right or wrong.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE043 / POST043	When faced with a problem, you usually look at what sort of outside things in your environment may be adding to the problem.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE043A / POST043A	You have an organized way to compare choices and make decisions.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE055 / POST055	It's okay for you to take and keep things that people are careless enough to leave laying around.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE056 / POST056	It's okay to cheat when you feel others are being unfair to you.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
PRE057 / POST057	Taking things from supermarkets and department stores doesn't hurt anyone.	5= Strongly Agree 4= Agree 3= Neither Agree nor Disagree 2= Disagree 1= Strongly Disagree
RECIDIV	Did the participating delinquent's recidivate during or after the CBT program?	0=No 1=Yes

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