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Relationships Among Patterns of Criminal Thinking Styles and Recidivism in Non-violent Offenders on Probation

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2019

Abstract

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Proposal Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Forensic Psychology

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February 9, 2020

Abstract

The 3-year rate of recidivism in the United States is around 43%, costing taxpayers millions of dollars every year. The purpose of this study was to investigate the relationship between criminal thinking styles and self-reported recidivism, which included crimes committed that were not reported to authorities. According to Ellis' Rational-Emotive Behavior Therapy theory, behavior is a direct result of cognitive activity. The research question asked what relationship existed between criminal thinking styles and recidivism for post-release non-violent offenders on probation. Using the Psychological Inventory of Criminal Thinking Styles, this study used a non-experimental survey approach, correlating scores from this measure with self-reported number of crimes from a sample of males and females ranging in age from18-65 years old (n = 9). Although responses to the recidivism question were obtained, the sample size was insufficient to show a significant relationship between these variables (r_s = .45). This effect size suggests that further research could be carried out to determine if, with a larger sample size, a significant relationship might be found. It is important for the criminal justice system and forensic mental health services to gain a better understanding of the relationship between criminal thinking styles and recidivism. This study has revealed that self-report of crimes committed can be collected, enabling greater knowledge of offenders' maladaptive behaviors so that those working in the field to help those offenders to reenter society can do so more efficiently, therefore, reducing recidivism.

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Dedication

I dedicate this academic achievement to my parents, Frank and Monique Mitsianis, who supported me during this journey. I also dedicate this to G. Douglas Lunsford all his support and motivation throughout the arduous process. Finally, I dedicate the body of this work to those who need the motivation and support to have the opportunity to change their lives.

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Without the support and encouragement of my mother, Monique Mitsianis, my father, Frank Mitsianis, my sister, Anne Brooks, my brother, James Mitsianis, my sister-in-law, Mary-Ellen Mitsianis, and two of my dear friends, Alycia Valdez and Debbie Walden, I wouldn't have felt that this would be achievable. But with their continued input, encouragement, and insistence, the project was finally done. Also, a thank you to Dr. Anthony Da Silva for his help. Finally, Dr. G. Douglas Lunsford has supported and motivated me through every stage of the creation of this dissertation. All of these wonderful people will forever be in my heart and thoughts with gratitude and love. I also want to give credit to my dogs, Berry, Mitsy, and Motley, for all their calming effect during the stress of this journey.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Background

During any given day of the year in the United States, there are one-and-a-half million people in prison, many of whom are repeat offenders, and within one year, 13.5 million people will spend time in the American prison system (Carson & Anderson, 2016; "U.S. Prison," 2017). This means that one American in 25 will go through this system (Pew Center, 2014). Every year, $50 billion is spent in the United States to keep offenders in prison (an average of $30,000 per prisoner).

This study was designed to examine the relationship between criminal thinking styles and recidivism in post-release, non-violent offenders. The construct of criminal thinking styles is measured by the Psychological Inventory of Criminal Thinking Styles (PICTS; Walters, 2013) while recidivism is measured using the self-reported number of legal infractions committed after first release from jail/prison (over or under one-year incarceration). Respondents were recruited only from among those on probation (see Appendix A). There was a gap in the literature about the relationship between criminal thinking styles and number of criminal acts with nonincarcerated populations. Further research was needed to understand this relationship. Significant findings would suggest that this relationship should be further examined. A relationship between criminal thinking style and recidivism could be used to develop programs to help people change their thinking patterns to reduce levels of recidivism and to decrease the impact of recidivism on society.

Recidivism has often been operationally defined as the reincarceration of offenders. However, this study will define recidivism as crimes committed after the first release and was measured using the self-reported number of legal infractions committed after the first release from jail/prison.

The major sections to follow will cover the background of the problem under investigation; the purpose of the study will be discussed with research questions and hypotheses. The study's theoretical framework, along with the nature of the study, will be covered along with the definitions, both dictionary and operational, to clarify terms used in this research. The scope and delimitations of the study will follow by presenting sampling technique, sample size, geographic positioning, assumptions and limitations. The final section will explain the significance of the study.

Problem Statement

Recidivism is an ongoing problem in the United States and rates of recidivism are being researched and reported yearly (U.S. Department of Justice, 2017). This study was conducted in Florida, where recidivism is very costly (Pew Center, 2011). Moreover, many of those who have spent time in prison are not learning how or developing the motivation to change their ways (Little, 2005). The 3-year rate of recidivism in Florida from 2008 to 2010 decreased slightly from 26.7% to 25.7%, indicating that 4 in every 15 or 16 of those released from prison returned to prison within three years (Florida Department of Corrections :FDOC, 2015). The decrease in recidivism for the entire country as seen from the statistics released by the Bureau of Justice on data collected on prisoners released in 2005 showed that the annual arrest percentage of released prisoners

in 30 states in 2005, over 3 years was 48% and those released in 2010 was 41% (Gelb & Velázquez, 2018).

The problem in the current research is that there are too few studies that provide a better understanding of whether non-violent felons' criminal thinking process is related to the rate of recidivism in this population. There have been studies on the relationship between criminal thinking styles and recidivism that combine violent and non-violent felons in prison and out of prison, but have been very few that deal with the population of non-violent offenders who have been released from jail/prison and are on probation (Walters, 2013).

Purpose of the Study

This quantitative correlational study addressed the relationship between criminal thinking styles and recidivism. The rationale for using this design was that the focus would be on whether criminal thinking styles were related to recidivism among non-violent felony offenders based on their scores on the PICTS and on their self-reports of criminal behavior after their initial release from jail/prison. Both the independent and dependent variables were measured numerically so the appropriate statistical analysis was correlation. The results of this research could prove beneficial for forensic mental health professionals in determining which inmates might be more or less likely to reoffend.

Research Questions and Hypotheses

The research questions and the hypotheses for this study were as follows:

RQ1: What is the relationship between general criminal thinking styles and recidivism for post-release non-violent offenders on probation?

H_{01}: There is no relationship between general criminal thinking styles and recidivism for post-release non-violent offenders on probation.

H_{a1}: There is a relationship between general criminal thinking styles and recidivism for post-release non-violent offenders on probation.

RQ2: What is the relationship between proactive criminal thinking styles and recidivism for post-release non-violent offenders on probation?

H_{02}: There is no relationship between proactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

H_{a2}: There is a relationship between proactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

RQ3: What is the relationship between reactive criminal thinking styles and recidivism for post-release non-violent offenders on probation?

H_{03}: There is no relationship between reactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

H_{a3}: There is a relationship between reactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

After the participants completed the inventory, their responses were entered into the Statistical Package for the Social Science (SPSS) computer program. When the histogram showed the responses to be skewed, a Spearman's correlation was obtained for each of the variables in the research questions.

Theoretical Framework for the Study

According to Corey (2015), the more common approaches used with offenders to address their behaviors were operant conditioning, self-management principles, and systematic desensitization. In order to pinpoint where the differences between offenders and nonoffenders was, it was necessary to use theoretically based measures.

The foundation for this study was cognitive behavioral theory, or more specifically, rational emotive behavioral therapy (REBT). It was developed by Ellis (1993). According to REBT, an individual's thoughts and beliefs are related to recidivism. Beliefs are regarded as causing behavior (David, Lynn, & Ellis, 2010). Ellis posited that irrational thoughts could lead to behaviors that are dysfunctional or deviant (David et al., 2010). The PICTS is designed to assess thoughts, beliefs and thinking styles and the theoretical framework is similar to the theory of REBT in that it states that these thoughts, beliefs and thinking styles influence behavior. However, it goes on to say that a person would use these thoughts like protective shields to ignore corrective exposure. Understanding thoughts, emotions, and behaviors may allow insight into the recidivism of the participants in this study (Bernard, 1998).

Nature of the Study

This study employed a correlational design to determine whether criminal thinking styles, as measured by the PICTS, predict recidivism in a post-release, non-violent offender population. A correlational design was chosen because there is insufficient evidence about this population to justify an intervention that would enable an experiment and the scope of the study does not allow the independent variable to be

manipulated; thus, neither a true nor quasi-experimental design would be appropriate (Creswell & Creswell, 2017). The data consisted of scores of constructs that already exist and were in numeric format. Therefore, the correlational design was the most appropriate for this research. The independent variables were scored on scales of the PICTS. The combination of seven of these eight subscales make up the General Criminal Thinking restructured (GCT-rc), Proactive Criminal Thinking (PCT) and Reactive Criminal Thinking (RCT) scales, the three scales were used to answer the research questions. The dependent variable was the self-reported number indicating recidivism.

Definitions

Criminal thinking, the independent variable, is defined as irrational thoughts that are considered to be the basis for the justification of criminal acts and measured using the GCT-rc, PCT, and RCT from the PICTS (Walters, 2013).

Recidivism is defined as repeating criminal behavior after release from prison the first time and is operationally defined in this study as the self-reported number of legal infractions committed after first release from jail/prison (National Institute of Justice; NIJ, 2008).

Assumptions

In this study, it was assumed that the PICTS was a valid measure and that the responses to this measure and to the questions about number of arrests, convictions, and sentences asked as separate questions after demographics have been completed, were truthful. This was a cross-sectional design.

If the research hypotheses were confirmed, then the information gained could be used to develop prevention programs and therapies that would help non-violent felony offenders who are currently on probation/supervision avoid becoming habitual offenders. This could decrease the number of crimes committed and the number of non-violent offenders who continue to engage in crime.

Scope and Delimitations

The study excluded offenders under age 18, offenders who have been convicted of a violent charge (e.g., murders), or those who were convicted of a sex offense. Felony offenders from outside the Tampa and Pinellas, Florida, areas were not included. The delimitation of using a sample of convenience instead of a probability sample could have led to under-representation or over-representation of certain groups within the population. Those who refused to take part in the study may represent a significant part of the offender population.

Limitations

A limitation of this study was the fact that this research was carried out only in Tampa and Pinellas, Florida, limiting the generalizability of the study to other these regions of the country. Generalization should be made to only those with post-release, non-violent felony convictions. Although it was assumed that the participants in the study would answer candidly and truthfully, a limitation of the study was that the responses were self-reported for the PICTS, which allowed for false responses. Finally, the sample size was very small (n=9) and the measure of recidivism was not researched as a valid measure of that construct.

Significance

The results of this study could influence those who work with people in prison and those who are released from prison and are trying to make a life for themselves in society. The results could be used to help guide practitioners in implementing appropriate treatment programs. Such programs could enable the offender to become a productive member of society and a positive influence within their families and in their communities.

Studying the relationship between criminal thinking styles and recidivism is important because it could yield knowledge about the possible causes of recidivism. Knowing causes could help professionals pinpoint thinking patterns that might influence criminal behaviors and then implement procedures to change those thinking patterns. Although the results of this study did not indicate that criminal thinking styles could cause recidivism, further research could be carried out to learn how influencing those thoughts could influence social change. Therapists could use this information to reduce recidivism by implementing and reinforcing new and productive thought processes. An individual who has been released from prison might then find a new way to approach life such that the problems faced could be solved using new avenues, which could lead them to be productive members of society.

Summary

This introduction began by stating the problem being addressed in this research and giving the purpose of this study as investigating the relationship between criminal thinking styles and self-reported recidivism. Major sections of this introduction covered

the background of the effectiveness of various programs in reducing recidivism indicating the lack of significant success, with both research questions and hypotheses identified. The study's theoretical REBT framework was covered giving both dictionary and operational definitions of criminal thinking styles and recidivism. The scope and delimitations of the study were provided covering the sampling technique, which was convenience sampling, sample size (n = 9), and geographic positioning of collecting data only from the Tampa and Pinellas counties. The limitations were the limited sample size and self-report responses. The final section explained the significance of the study, which was the importance of finding a link between criminal thinking styles and recidivism.

CHAPTER 2: LITERATURE REVIEW

Introduction

At the end of 2014, nearly seven million persons in the United States were under supervision of the correctional system with nearly five million on probation and beginning to readjust to life in society (Kaeble, Glaze, Tsoutis, & Minton, 2016). Many of them subsequently relapsed into criminal behaviors (Durose, Cooper, & Snyder, 2014). Different studies have yielded different recidivism rates, but the trend in this area suggests a high level of recidivism. According to Durose et al. (2014), 76.6% of offenders both violent and non-violent, who are released from prison, return to prison within 5 years, despite efforts to decrease recidivism. The 3-year recidivism rate in Florida over the period of 2006–2013 decreased from 32.5% to 25.7% (FDOC, 2015). This study focused on one factor that could contribute to recidivism: the ways in which an offender thinks.

Over 600,000 offenders are released from prison per year in the United States; they must readjust to living in society (U.S. Department of Justice, 2017; Holzer, Raphael, & Stoll, 2003). Unfortunately, after they have been released from prison, while they are trying to reenter their communities, they often reoffend at astonishing rates, as high as 76.6% (NIJ, 2014; Langan & Levin, 2002). These relapses in criminal behavior may involve burglary, larceny, theft, dealing drugs, or possessing stolen property or weapons. Attempts are being made to decrease the number of those who relapse (Barber, 2014). For example, programs in Florida have been offered to all inmates within the 18-month period prior to their release (Barber, 2014). Unfortunately, even after participating

in those programs, the recidivism rate fluctuated, and there was no practical decrease in recidivism over a 10-year period (Seiter & Kadela, 2003).

If offenders are to have a chance to change, there needs to be a collaboration between those working directly with the offenders and those working to protect the offenders and community members, such as those working for the probation service and contracted to the Department of Corrections (Wormith, Althouse, Simpson, Reitzel, Fagan, & Morgan, 2008). Marlowe (2003) found that when the drug courts were well structured and included a cognitive behavioral approach, the number of offenders who relapsed decreased. Aos et al. (2006) examined correctional programs that had been carried out over 35 years and found that cognitive behavioral therapy programs reduced recidivism by approximately 8% in 300 evaluations.

According to the Pew Charitable Trust (2011), 43% of those released return to prison within 3 years. The cost to the taxpayer of recidivism is rising yearly. Data collected by the Pew Center showed that by cutting this rate by only 10%, in excess of $635 million could be saved per year.

A study of 404,638 released violent and non-violent prisoners across 30 states indicated that rates of recidivism were as high as 56.7% being rearrested within 1 year, 67.8% being rearrested within 3 years, and 76.6% being rearrested within five years (Durose et al., 2014). This study also revealed that offenders who took or destroyed property were most likely to reoffend, with 82% of such offenders rearrested, whereas the percentage of drug offenders that were rearrested was 76.9% and the percentage of violent offenders who were rearrested was 71.3% (Durose et al., 2014).

Research into the rates and predictors of recidivism could help to guide those who wish to decrease recidivism. Meta-analyses from 1996 to 2011 showed a relationship between recidivism and cognitions (Gendreau, Little, & Goggin, 1996; Little, 2001, 2005; Van Vugt et al. 2011). Recidivism has been predicted by number of prior arrests, supervision post release, behavior while incarcerated, and number of offenses. A significant predictor of lower recidivism has been post-release level of education, with data indicating that recidivism might decrease if education were provided in release programs (Lockwood, Nally, Ho, & Knutson, 2014).

The purpose of this quantitative correlational research study was to analyze the relationships among criminal thinking styles as measured by the PICTS (Walters, 1996) and recidivism after first release from jail/prison as measured by self-reported number of Legal infractions committed since first release. Identifying these relationships might have contributed to an understanding of how criminal thinking styles influences recidivism. The study focused only on non-violent offenders who were on probation because there appeared to be a gap in the literature as many of the studies had been done on violent or a combination of violent and non-violent offenders. Many also dealt more with prisoners and inmates rather than those who were on probation. Non-violent crimes do not involve the use of force or harm to another and are often assessed by determining the financial loss to the victim. This type of crime would include larceny, theft, drug offenses, trespassing, dealing with stolen property, forgery, identity theft, or white-collar offenses. It seemed logical that probationers who have committed non-violent crimes would be more willing to respond honestly to the kinds of questions on the PICTS because they

would be less concerned about the impression their responses would make. Researchers have tended to consider violent and non-violent offenders to be part of the same population and have conducted studies combining these two populations as though they were the same. In order to determine whether the relationship between criminal thinking styles and recidivism differed between non-violent and violent offenders, these populations needed to be studied separately.

Walters and Lowenkamp (2015) recognized that community-based offenders versus prison based samples were more apt to respond to the PICTS questionnaire. They also stated that community-based participants had a tendency to have a lower risk of violent behavior when compared to the combined violent/non-violent population in prison.

Non-violent community-based offenders and prison-released inmates were studied in an effort to establish the relationship between the scores on the PICTS and recidivism (Walters & Lowenkamp, 2015). They found significant relationships between recidivism and offender thinking styles and attitudes (r = .20), specifically the frustrations felt about following societal norms for legal behavior to the point that they give up trying. Kiriakidis (2010) also examined those relationships in youth offenders. Those offenders were non-violent, and the measure employed to assess cognitions and attitudes were constructed by these researchers. The construct of attitude, subjective norm, and perceptions of behavioral control correlated significantly (r = .55 to .73) with intention to re-offend.

This study used a previously validated measure to evaluate offender criminal thinking styles and recidivism. The 80-item PICTS attempts to measure the construct of criminal thinking, which is made up of the Thinking Styles Scales that reflects (a) the degree the offender blames others and their environmental circumstances for why they commit crimes (mollification), (b) the amount the offender says, ”the hell with it” and does not care what happens when she or he commits a crime (cutoff), (c) the degree the offender believes that they are entitled to commit crimes to get what they want (entitlement), (d) how much the offender attempts to control others versus exercising self-control (power orientation), (e) the level of belief that the offender commits crimes for the good of others so they feel good about themselves (sentimentality), (f) the degree the offender believes that they cannot be caught and will not suffer consequences for committing crimes (super optimism), (g) how much the offender takes short cuts to obtain what they want by committing crimes (cognitive indolence), and (h) the degree the offender could develop and stick to a plan (discontinuity). Based on the cognitive behavioral theory, irrational thinking, criminal thinking styles, should precede criminal acts (Walters, 2002).

This chapter identified the search strategies used to gather literature relevant to this study. This was followed by a brief summary of the theoretical foundation that grounds the study and the conceptual framework for the variables being evaluated. A literature review follows based on research findings about recidivism, which includes contributing factors; successful and unsuccessful attempts to reduce these contributing factors, especially criminal thinking; and possible solutions. Themes and gaps in the

literature are summarized, and an explanation is provided for how the study fills a current gap in the literature.

Literature Search Strategy

In order to identify relevant literature, I used PSYCInfo, Web of Science, and Google Scholar with the following key words and phrases: such as *felony offenders*, *recidivism*, *Psychological Inventory for Criminal Thinking Styles (*PICTS*), environmental effects of recidivism*, and *genetic and peer influence on felony offenders*. Key combinations of search terms included *felony offenders* + *recidivism*, PICTS + *recidivism*, *criminal thinking* + *recidivism*, PICTS + *recidivism*, and *irrational beliefs* + *felony offenders* + PICTS + *recidivism*. The search initially covered the period 2005 to 2017, and included studies that would provide the historical background of the development of the PICTS.

Sources included peer-reviewed journal articles, manuals for the measures, prison commission reports, books, U.S. Census documents, U.S. Department of Health and Human Services reports, government-sponsored supplemental reports, Florida law statutes, Substance Abuse and Mental Health Service Administration (SAMHSA) reports, peer-reviewed presentations given at conferences, state fact sheets, and published and unpublished doctoral dissertations.

Theoretical Foundation

Cognitive behavioral theory provided the foundation for this study. The specific type of cognitive behavioral theory to be used is based on the model for rational emotive behavioral therapy (REBT) developed by Ellis (1994). REBT is predicated on the

understanding that an individual's thoughts and beliefs are related to behaviors and that "men are disturbed not by events, but by the views which they take of them" (Seddon, 2001, para. 8). Beliefs play a dominant role in this theory, in that they are regarded as causing behavior. Ellis called this the A-B-C model, in which "A" stands for the antecedent or triggering event, "B" stands for the belief or thought about the event, and "C" stands for the consequences, the emotional/behavioral reaction to the belief about the event (David, Lynn, & Ellis, 2010). Ellis (2001) focused on problematic beliefs and emotional reactions and posited that irrational thoughts can lead to behaviors that are dysfunctional or deviant. Briefly stated, irrational and negative beliefs lead to irrational and negative behaviors (David et al., 2010).

Speculation about the link between cognitions and behavior is not new. In a seminal work, Glueck and Glueck (1950) explored this link by using the tentative causal formula, which consists of five dimensions to distinguish those at highest risk for deviant behavior: physical, temperamental, attitudinal, psychological, and sociocultural. Two of these dimensions, attitudinal and psychological, are the foci of the proposed study. According to Glueck and Glueck (1950), certain negative attitudes, such as hostility and defiance, can lead to behaving in a deviant manner. Their research findings indicated that children who scored high in these negative attitudes were more likely to behave in deviant ways in adolescence and adulthood.

In a seminal study, McCoy et al. (2006), using self-report measures, examined the relationship between irrational thinking and illegal behavior in 393 male and female college students. Illegal behavior included drug offenses, control-status offenses, property

crimes and violent crimes. Males who committed violent crimes scored higher on all scales measuring irrational thoughts than those who committed lesser crimes. Both males' and females' scores reinforced the relationship of irrational thinking to crime.

In another seminal study by Walters (2005b), specific cognitive constructs were significantly correlated to recidivism. Walters researched 137 violent and non-violent male prisoners using a measure of irrational thinking to predict recidivism. He discovered that irrational thought patterns significantly related to recidivism were those that assessed the need to take shortcuts to get what one wants in life and/or the belief that one is entitled to break laws for personal gain. In his study, he reported that scores on the measure of irrational thinking were predictive of recidivism among violent and non-violent offenders.

Walters' study (2005b) was built on earlier seminal findings about relationships among the way criminals think and recidivism. Previously, in 1996, he was able to show a relationship between criminal thinking styles and institutional adjustment by examining 536 male federal prisoners (Walters, 1996). Results from another study also indicated that criminal thinking style responses predicted disciplinary problems among non-violent female inmates of a medium security state prison (Walters & Elliot, 1999). In 2003, Palmer and Hollin (2004) found a positive relationship between criminal thinking styles and recidivism in a group of 174 released English violent (32%) and non-violent (68%) prison inmates.

These findings have suggested that there are important relationships among criminal thinking styles and recidivism in violent and non-violent offenders. The premise

is not new (Glueck & Glueck, 1950), but Walters (1996) developed an assessment measure to evaluate criminal thinking styles that will be discussed at length later, the PICTS (1995). Walters (1996) demonstrated the predictive value of this measure, thereby providing an acceptable rationale for using the PICTS in the current study that evaluated the relationships among criminal thinking styles and recidivism among potential repeat offenders.

Walters and Cohen (2016) used responses from 35,147 male and 5,254 female federal probationers and supervised releases of mixed violent and non-violent offences to address the question as to whether recidivism increases when criminal thinking increases. They predicted that scores from the General Criminal Thinking (GCT-rc) scale would increase the PICTS' power to predict recidivism and correlated the scores from these two measures with time until next arrest. As Walters and Cohen predicted, scores from the GCT-rc did increase the predictive power for recidivism of the PICTS for both males and females.

Walters (2014) examined the items using item response theory (IRT) in an analysis of the PICTS using 26,831federal probationers having served time for violent (5%) and non-violent (95%) crimes. He compared these results to 3000 prisoners of mixed offenses from previous research and although he concluded that some items from the PICTS could be improved, the measure was able to discriminate between the two groups and that predictions of recidivism were still significant. Those findings supported the use of this measure in the current study.

In sum, Ellis (1994) introduced a theory based on the concept that a person's cognitive view was a major factor in determining his or her behavior, and David et al. (2010) has extended this to show that deviant thoughts lead to deviant behaviors. Glueck and Glueck (1950) pointed to five dimensions that influenced deviant behavior of which two, attitude and psychological, are the foci of the current study. McCoy et al (2006) were able to show that higher scores on measures of irrational thought were related to more serious crime, reinforcing the previous research suggesting that attitudes and beliefs lead to deviant behavior. Walters (2005b) determined that irrational thought patterns were related to recidivism using the measure that he had developed when he used it for that that purpose. Walters and other researchers had, in several studies, provided evidence that the PICTS was a valuable measure in the prediction of recidivism (Palmer & Hollin, 2004; Walters, 1996; Walters, 1997; and Walters and Elliot, 1999). Walters and Cohen (2014) demonstrated that this measure was sensitive enough to detect the difference between a group of probationers and a group of prisons. He also showed that the PICTS used in conjunction with other measures improved predictive power when predicting recidivism. The theory that irrational thought processes lead to deviant behavior and that the PICTS would enable a significant ability to predict recidivism is the bases of this current study.

All of the above provides a basis for the current study to establish more empirical evidence that criminals have a different way of believing and thinking than those who we view as non-criminals. They have a different perception and reaction and lack impulse

control. Evidence from the current study had the potential to provide ongoing support for the theories proposed by Walters.

Literature Review Related to Key Variables and/or Concepts: Theories of Criminal Behavior and Recidivism

In addition to cognitive theories that explain criminal behavior, various researchers and theorists have developed other theories that suggest why a person would commit crimes. The following theories are briefly reviewed in this section: *social learning theory*, *differential association theory*, *and functionalist theory*, which is made up of *strain theory*, *control theory*, and *conflict theory*. Towards the end of this section about theories, cognitive theory is discussed in greater depth.

Social learning theory is based upon the idea that deviant behavior is learned. A person who grew up in a community seeing deviance modeled as typical behavior would learn that was the type of behavior that was both accepted and necessary for survival in that community. Parents, other family members, peers, or anyone in a certain environment could model deviant behavior (Akers, 2002). If friends in the neighborhood acted as though they believed that deviant behavior is normal and acceptable whereas morally sound behavior is abnormal and not acceptable, it would be an unusual character that continued thinking that he or she should pursue adaptive moral behavior. It is very common for people in such neighborhoods or communities to believe that reporting criminal behavior to authorities, i.e., “snitching,” is a form of betrayal.

In face-to-face interviews with 1400 adults who had both violent and non-violent criminal behavior from three European countries, social questionnaires were completed

providing researchers with evidence supporting social learning theory as a basis for criminal behavior (Tittle, Antonaccio, & Botchkovar, 2012). The researchers hypothesized that those who had been brought up in an environment in which they would learn deviant behaviors would demonstrate a higher rate of criminal behavior and in this study found that the measures of prior reinforcement of criminal behavior predicted probability of future criminal behavior. Besides finding that social learning increased the predictability of criminal behavior, they found that there were social influences on cognitions and, more specifically, morality, which, when identified, were even better predictors of recidivism (Tittle et al., 2012).

Differential association theory is similar to social learning theory in that it states that being exposed to peers whose values, attitudes, techniques, and motives are deviant will influence an individual to believe that deviance is acceptable, and that this can lead to the individual taking part in criminal behavior (Akers, 2002). Associating with those who are deviant may encourage individuals to support the ideas modeled by those deviants because of this exposure. This would mean that the likelihood that a person would take illegal drugs would increase if he or she associated with other people who abused drugs.

The evidence of the effect of association with delinquent peers on criminal behavior in a seminal study indicated that juveniles who associated with those who had attitudes that supported the use of violence exhibited delinquent behaviors themselves (Warr, 2005). The study included 929 children, ages 10-17 years, who were interviewed to determine whether respondents had delinquent friends. A significant relationship was

found giving the differential association theory as a viable explanation of criminality. According to Warr (2005), one of the strongest influences on delinquent behavior is delinquent peer behavior and level of parental supervision. In an attempt to discover the relationship between styles of parental supervision and type of friend, he contacted 1738 parents living with 929 children (aged 10-17) and using a survey method found a strong association between those variables. He was able to conclude that conscientious parenting influenced the selection of the kinds of friends made by adolescents. His findings further supported the view that learned behaviors and morals are related to future criminal behavior.

In an attempt to establish support for the differential association theory, Haggerty, Skinner, McGlynn-Wright, Catalano and Crutchfield (2013) examined 332 eighth and tenth grade students in an observational study. They examined the relationships between parenting practices, types of peers, and self-reported violent behavior using the Inventory of Parent and Peer Attachment (Amsden & Greenberg, 1987) and self-reported and peer-reported delinquent behavior. These researchers determined through significant chi-square and *t* statistics that socializing with delinquent friends was a significant mediator variable between race and income when predicting the criterion variable of violent behavior (Haggerty et al., 2013). This study supports the differential association theory, which states that values, attitudes, and reasons to commit crimes are obtained through association with others.

In a qualitative study conducted by Ahmad and Ali (2015), 15 violent and non-violent prisoners, aged 20 to 40 years, were interviewed concerning their socialization

with criminal companions and the degree to which the prisoners had adopted the values and attitudes of those companions. The majority of these participants reported having criminal relatives or criminal peer groups and also that inspiration and techniques to commit crimes came from these people. These findings lend further support for the social learning theory, which states that learning occurs in a social context through both observation and instruction. It also lends further support for the differential association theory and suggests the possible motives for recidivism of gaining approval from intimate associates and belief that committing a crime is behaving normally in a criminal culture. (Ahmad & Ali, 2015). Continued association with other criminals, then, would logically lead a person to reoffend.

Strain, control, and conflict are three theories of crime. *Strain theory* indicates that when persons are unable to reach goals, they may become stressed and overwhelmed, which could drive them to behave in deviant ways to deal with the stressors (Agnew, 1992). For example, a businessman who becomes stressed about reaching his goals could decide to evade taxes. Hoffman and Ireland (2004) recognized that this theory does not currently hold a high position in the minds of many criminology researchers and Hoffman and Spence (2010) wrote an article proposing that strain was more than just a sense of failure to achieve; strain incites the emotion of anger which will relate strain to delinquency in that a person who feels unjustly treated will feel justified in his need to retaliate against society.

In a seminal study by Hoffman and Ireland (2004) of 12,421 high school students from 883 schools, researchers expected to demonstrate that strain was positively

associated with delinquency by surveying attitudes and recidivism rates. Results supported their hypothesis concerning the impact of strain on delinquency showing that the more strain was experienced, the more the students perceived that their delinquency was justified and the higher was the likelihood of the student behaving in a delinquent way. These findings show a link between recidivism and the perception by students that their delinquency is justified.

Control theory suggests that people are generally weak and prone to temptation and that when regulation is not in place, they will behave in deviant ways in response to temptation (Ferguson et al., 2011). For example, if a person was offered drugs and believes that there would be no sanction for accepting, the person would not resist the temptation. A person living on the streets where there are few sanctions for transgressions against another homeless person would feel tempted to commit a crime.

Ferguson et al. (2011) explored the applicability of control theory to the criminal behavior of homeless youth. Their study investigated the relationships among absence of parental supervision, number of times in jail, employment history, substance abuse, and depression/mania symptoms and history of arrests. They used a cross-sectional convenience sample of over 37 homeless, violent and non-violent, male and female youths ages 18-24 from each of five major U.S. cities (n=238). In this correlational study, the criterion variable was number, and type of offenses committed and was measured using a 10-item self-report asking respondents about what crimes they had committed including status offenses and violent offenses. These researchers hypothesized in accordance with control theory, that absence of parental supervision, number of times in

jail, employment history, substance abuse and depression/mania symptoms would be associated with criminal behavior of homeless youths. They found significant correlations in an analysis of the data collected on these factors and their relationship with history of arrest. Findings supported the control theory in that they show that if there is a lack of parental supervision of adolescents, there is a significant potential of delinquent behaviors which would lead to the committing of more serious crimes.

Conflict theory, which is based on Marxist social theory, suggests that social and economic forces that operate in society can contribute to crime (Ritzer & Goodman, 2004). According to this theory, the principal idea held by the "have-nots" in society is that laws and the justice system operate to protect the rich and apply to the poor with the intent to control them by imposing morals and behaviors that will maintain the hierarchal society. In other words, the have-nots perceive that the law separates the haves from the have-nots such that those without power do not have the same legal rights, which seems unfair to the have-nots. When a person at the bottom of the socioeconomic ladder feels that they are being treated unfairly, he or she could feel justified in committing a crime against a person high on that ladder. (Ritzer & Goodman, 2004).

Conflict theory and consensus theory has been used by law enforcement officials to detect criminal behavior. Consensus theory has evolved from functionalism theory as a means to explain detection of criminal behavior. The consensus theory assumes that norms and laws have evolved based on general societal agreement about what is morally right and what is criminal behavior (Renauer, 2012). To enforce laws, police officers look for individuals who seem to be breaking these laws, regardless of race or ethnicity. The

conflict theory, on the other hand, predicts that certain low socio-economic groups, “the have-nots,” commit more crimes. If the police believe that certain racial or ethnic groups make up “the have-not” groups, they are more likely to believe that members of these racial-ethnic group commit more crimes (Renauer, 2012).

Two recent studies have examined police stop and search strategies and evaluated whether police interventions seem to be governed by conflict theory or by consensus theory. Renauer (2012) evaluated police stop and search strategies using a total of 250,000 incidents across 94 neighborhoods. A number of variables were evaluated in this study but to be discussed here is whether police treated members of ethnic groups differently. Conflict theory would predict that the police would stop more Blacks and Hispanics in White neighborhoods. Results such as these would suggest that police stop would occur when seemingly people are “out of place.” Consensus theory would predict that criminal behavior rather than race or ethnicity would be associated with police stops and searches. Results that focused on overall stops were consistent with conflict theory, because it appeared that police focused on race as criteria for stop and search. Among the police stops, 17% and 10% involved Blacks and Hispanics respectively even though both ethnicities represented only 6% of the population.

Renauer (2012) in the same study also analyzed calls for services in different neighborhoods to determine which theory would predict outcomes. The data analyzed consisted of examining the number of times citizens called for police according to the ethnicity/race of specific neighborhoods. The number of calls across neighborhoods did not differ according to ethnicity/race. The results of this analysis suggested that

consensus theory explained the outcomes, because it appeared that criminal behavior triggered service calls, not ethnicity or race.

A similar study to compare interpretations of police stop and searches according to conflict theory and consensus theory has been conducted more recently (Hayle, Wortley, & Tanner, 2016). Stop and search instances were evaluated according to race/ethnicity for high school students (*n*=3393) who lived at home and youths living in a shelter or on the streets (*n*=396). The results indicated that among the high school students, Blacks were more likely to be searched compared to Whites, suggesting that race/ethnicity triggered police stop and searches. These findings were more consistent with conflict theory that would predict that police action would likely be based on race or ethnicity, because high school students overall are not a high crime group. The police attributed criminal behavior to the race/ethnicity that they associated with higher criminal behavior.

Hayle et al. (2016) obtained different findings with the "street youth" compared to the high school students living at home. For the "street youth," race/ethnicity did not turn out to be the primary factor in police stops and searches perhaps due to the high crime nature of their neighborhoods. The primary reason for police stops-and-searches was criminal behavior. These findings were more consistent with consensus theory that predicts that in high crime areas, police would target criminal behavior, not race or ethnicity. In high crime areas, police would not attribute criminal behavior according to their beliefs about which ethnic groups commit more crimes. The police would base their stop and search on evidence of criminal wrongdoing.

One more theory will be discussed before the proposed study is further discussed. The risk-need-responsivity model (RNR) introduced by Andrews and Bonta (2010) was developed based on numerous empirical findings. They suggested that criminal behavior and recidivism can be predicted reliably and that criminogenic risks to reoffend should be considered when deciding upon treatment. The RNR model was developed based on numerous empirical findings and has suggested that criminal behavior and recidivism can be predicted reliably and that criminogenic risks to reoffend should be considered when deciding upon treatment. Evidence supporting the RNR model includes seminal findings by Andrews and Bonta (2007) that adherence to the principles of RNR will cause a significant decrease in recidivism (17-35% depending on setting).

One of the variables linked to recidivism in the RNR model is the offender's attitudes and thought patterns which support criminal behavior (Andrews & Bonta, 2010). Andrews and Bonta's (2010) RNR theory indicate that those who will reoffend will do so deliberately and consciously with the knowledge that they could regulate their behavior but automatically choose not to because of deeply held beliefs. An example of this might be when a person commits a crime, he might rationalize that certain crime is acceptable or that it is necessary to do the opposite of what authority figures say. They also assert that if a person feels that it is necessary to commit a crime, they will do so.

The Role of Cognitions and Attitudes in Recidivism

Studies have shown a relationship between recidivism and offender's criminal thinking styles. Kiriakidis (2010) investigated the beliefs, attitudes, subjective norms, and perceived behavioral control toward future reoffending of youth non-violent offenders

with the intent to examine the relationship between these factors and recidivism. He hypothesized that these relationships would be significant. He gathered a sample of 152 offenders younger than 21 years of age and used surveys to determine the level of each independent variable of perceived behavioral control, belief-based measures of attitude, and subjective norm and their relationships with intent to commit crimes in the future and found r = .43, .48, and .58, respectively. Correlations between these measures indicated that young offenders believed that they had certain impediments to overcome, and these beliefs, combined with other behavioral beliefs and underlying attitudes toward offending in general, increased their intent to reoffend in the future.

Mandracchia and Morgan (2010) used responses to the Measure of Offender Thinking Styles (MOTS; Mandracchia, Morgan, Garos, & Garland, 2007) by 435 adult male violent and non-violent inmate offenders to examine relationships among types of criminal thinking styles and the offender characteristics of level of education, prison time already served, the length of sentence imposed, and acceptance of mental health services. Mandracchia and Morgan (2010) asked offenders to respond to 77 items representing thinking errors and measuring criminal thinking according to theories of maladaptive cognition. Exploratory factor analysis of participants' responses revealed a model involving three factors: cognitive immaturity, control, and egocentrism. Mandracchia and Morgan (2010) found a significant canonical correlation (loading of at least .30) showing a relationship between criminal thinking and a set of all offender characteristics. The MOTS scores were higher for those with more education, longer sentence length, more time served, and lack of reception of mental health services. Cognitive immaturity

showed the strongest loading by far (.992) over the other variables: egocentrism (.640), control (.555; Mandracchia & Morgan, 2010). This suggests that thought processes linked to cognitive immaturity reflected criminal thinking styles more than the other variables. That is to say that when a person's thinking process reflects immaturity and lack of logical progression, they are more likely to commit crimes.

Measurement of Criminal Thinking

Research concerning the role that criminal thinking styles play in recidivism led to the development of an assessment tool to measure criminal thinking. In 1995, Walters created the PICTS to assess felony offenders' thought processes (Walters, 1995a). Over a 10-year period, Walters refined this assessment tool, and today it reliably measures eight thinking styles that have been found to be related to serious criminal behavior (Walters, 2006). The PICTS is an 80-item self-report measure of criminal thinking styles in a forensic population. This measure is time-efficient, cost-effective, and is designed to obtain the maximum amount of information with a minimal amount of client effort (Walters, 2013). The eight thinking styles measured by the PICTS that Walters suggests are related to recidivism are a) mollification, or blaming of society, b) cutoff, or a tendency to give in to the pressures of life, c) entitlement, or a sense of justification of behavior, d) power, or desire to hold sway over others, e) sentimentality, or belief that they have the welfare of victims in mind, f) superoptimism, or the belief that they are invulnerable to consequences, g) cognitive indolence, or the lack of thinking about consequences of actions, and h) discontinuity, or the inability to stick to a determined way of behaving (Walters, 2013).

The two following studies have shown that the PICTS predicts recidivism for felony offenders. Walters (2011) evaluated 178 male violent and non-violent federal inmates to determine the role that criminal thinking styles play in recidivism. The participants' ages ranged from 20 to 62, with education ranging from 6 to 17 years. The participants completed the PICTS, and a trained staff member completed the Level of Service Inventory-Revised: Screening Version. (LSI-R:SV) is a validated screening tool based on the RNR model that identifies problem areas in an offender's life and predicts recidivism. The screening covers 10 domains: education/employment, drugs/alcohol abuse, family/marital, financial, accommodation, emotional/personal, attitude/orientation, leisure/recreation, and companions (Andrews & Bonta, 1998). Scale scores from both the PICTS and the LSI-R:SV were predictors of recidivism over the time span of 1-53 months. These results demonstrated the validity of the PICTS in identifying criminal thinking styles as related to recidivism (Walters, 2010).

Walters and Lowenkamp (2015) sought to determine whether the PICTS could predict recidivism efficiently and found that it was able to do so in community-based offenders as well as prison-released inmates. They used a sample of 81,881 violent and non-violent males and 14,519 violent and non-violent females from federal prison to show that, along with age and criminal history, the PICTS had well-established incremental validity as a general predictor of recidivism and, if used in conjunction with other assessment tools, could be valuable in predicting recidivism. Effect sizes of the prediction were moderate to low when age and criminal history were controlled: $r = .20$ (Walters & Lowenkamp, 2015). This study reaffirmed that antisocial cognitions

constitute one of the four major predictors of recidivism, along with criminal associates, criminal history, and anti-social personality (Andrews, Bonta, & Wormith, 2006).

Summary and Conclusions

The theory providing the foundation for this study is rational emotive behavioral theory (REBT). In a seminal study by Ellis (1993), REBT is explained and discussed. The reason why REBT provides the best explanation for recidivism is that it has demonstrated an understanding that the individual's thoughts and beliefs are related to behaviors. For this study, the behaviors of interest are criminal thinking styles of criminals. The REBT could account for the beliefs, behaviors, thought processes, and reactions of the criminal. REBT could account for triggers that might cause the criminal to do what they do, and these triggers consist of thoughts, attitudes and beliefs that precede criminal behavior.

Conducting this study was a necessary step towards establishing whether there was a relationship between criminal thinking styles and recidivism that might help professionals who work with non-violent offenders to provide their charges with tools to aid in their quest to reenter the community and become productive members of society. Research of this type might assist those working in the department of corrections by providing information about the relationship between criminal thinking styles and recidivism and might help to decrease the amount spent yearly on incarceration in prisons.

All total, 29 studies were summarized in this literature review on the relationships between forms of criminal thinking styles and recidivism. In 16 of these studies, the

participants were offenders incarcerated in a correctional facility. Of the studies that were conducted in prisons, 10 included both violent and non-violent offenders and four included non-violent offenders only. In 15 of the studies, the participants were offenders in the community under probation supervision. Of these, six of the studies focused on violent and non-violent offenders, and nine focused on non-violent.

Based on the studies that have been done, least is known about non-violent offenders who are under community supervision and whether their criminal thinking styles are associated with recidivism. This study attempts to fill this gap by including only non-violent offenders as participants who are in the community. The gap in the literature is that there are few studies that investigated non-violent offenders exclusively. This study was designed to elucidate the relationship between criminal thinking styles and recidivism for non-violent offenders' post release after first jail/prison sentence and focused exclusively on the non-violent offenders who were on probation at the time. The findings from this study address the gap in the literature and indicate another direction for future researchers to look.

In Chapter 3, there will be a discussion of the research design and rationale for it. There will also be a description of the population and sampling technique to obtain participants, their race and age. The measures will be described with psychometrics provided. The procedures for data collection will be explained along procedures to address ethical issues. The statistical analyses will be covered along with an explanation of the threats to validity and justification for the research design.

CHAPTER 3: RESEARCH METHOD

Introduction

The purpose of this study was to examine the relationships between the different types of criminal thinking styles of non-violent offenders and recidivism after their first release from jail/prison. Criminal thinking styles were measured by the PICTS (Walters, 1995a). Recidivism was measured by self-reported number of crimes committed after first release from jail/prison.

This chapter includes information about the research design, the rationale for using it, constraints that come with using the design, and how the results of this study might be used to increase knowledge on the topic of recidivism. The methodology section includes a description of the target population, sampling procedures, and the results of the power analysis to determine sample size. Procedures for obtaining participants, demographic information, and how the data were collected are explained. All relevant information about the PICTS will be provided with full psychometrics, norms, and publisher's information. Scoring procedures and data analysis will be detailed and threats to validity will be addressed.

Research Design and Rationale

In keeping with the research questions, which asked about the relationships between the construct of criminal thinking styles and self-reported recidivism, the predictor variable measures of criminal thinking styles were researched to obtain a valid way to measure this construct. The independent or predictor variables are types of criminal thinking styles measured by the PICTS *(*Walters, 1995a). The types of criminal

thinking styles measured by the PICTS include general criminal thinking-restructured, proactive criminal thinking, reactive criminal thinking, and seven more specific types of criminal thinking styles. The definitions for the types of criminal thinking styles were presented in Chapter 1 and will be discussed in this chapter.

Instrumentation and Operationalization of Constructs

The dependent variable was recidivism, defined as the number of self-reported crimes committed post-release by non-violent offenders on probation. Participants were asked to report how many times they had committed a crime; the frequency reported was used to determine the type of statistical analysis used. In that the response range was not only 0 or 1, the statistical analysis would not be logistic regression, as has been used by Walters (2013). As suspected, there was a wide range of responses, and because they were right skewed, Spearman's correlation was used to determine the relationship.

Research Questions

RQ1: What is the relationship between general criminal thinking as measured by the General Criminal Thinking scale of the PICTS and recidivism as based on number of self-reported crimes committed post-release by non-violent offenders on probation?

H_0: There is no relationship between general criminal thinking styles and recidivism for post-release non-violent offenders on probation.

H_1: There is a relationship between general criminal thinking styles and recidivism for post-release non-violent offenders on probation.

RQ2: What is the relationship between proactive criminal thinking styles as measured by the Proactive Criminal Thinking scale of the PICTS and recidivism as based

on number self-reported crimes committed post-release non-violent offenders on probation?

H_0: There is no relationship between proactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

H_1: There is a relationship between proactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

RQ3: What is the relationship between reactive criminal thinking styles as measured by the Reactive Criminal Thinking scale of the PICTS and recidivism as based on number self-reported crimes committed post-release non-violent offenders on probation?

H_0: There is no relationship between reactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

H_1: There is a relationship between reactive criminal thinking styles and recidivism for post-release non-violent offenders on probation.

Research Design

This study used a non-experimental, quantitative, correlational design with cross-sectional inventory data. This design would enable the research questions to be answered by providing correlation coefficients indicating the strength and direction of the relationship between quantitative variables when neither is being manipulated. This approach would enable further analysis of significant findings in that it would allow a regression formula for the prediction of recidivism by felony offenders. Correlational

design using surveys are often relied upon by researchers for research questions of this type (Rea & Parker, 2005).

Rationale for research design. The rationale for using this design was that this study focused on whether or not there was a relationship between criminal thinking styles and recidivism. More specifically, could scores from the PICTS predict recidivism in felony offenders? An experimental design (true or quasi) was not used because the independent variable could not be manipulated as the participants had preexisting criminal thinking styles and were necessarily from a specific population of released offenders (Creswell, 2009). The reason why correlational design was chosen instead of another design was that the nature of the research questions specifically queries the relationship between variables. The predictor variables were scored on a standardized test of criminal thinking styles and the criterion variable was number of self-reported crimes committed post-release non-violent offenders on probation. Although Golafshani (2003) indicated that quantitative research should be used with the idea of testing hypotheses to determine a causal relationship, prior to carrying out such research, it is relevant to the subject under consideration to use correlational research. In this type of research, inference of causality cannot be made between the variables but could provide information about the predictability of recidivism using criminal thinking styles when significant findings are obtained and this could be useful in future research.

This was a convenience sample and local programs in the community were contacted to request that they allow the flier (Appendix B) to be displayed in their facility to recruit those who are willing to complete the inventory.

Methodology

Population. The target population was males and females in the state of Florida of any ethnicity older than 18 who were on probation for non-violent offenses. This population did not include those who had ever been convicted of committing violent or sexual offenses. Each participant completed an eligibility form confirming the above criteria (see Appendix A). Non-violent felony offenders currently on probation was the correct population to use to conduct this study because there was a paucity of information about this sector of the population of offenders. A demographic questionnaire was provided requesting information on age, gender, and ethnicity to enable the representativeness of the sample to be assessed (see Appendix C). The population of active supervised offenders on community supervision in the state of Florida at the end of 2016 totaled 136,500 (FDOC, 2017) of whom 76.5% fell within the scope of this study in that they were specifically non-violent offenders unless their records had been sealed, e.g., robbery, burglary, theft, forgery, fraud, drug, or weapon offense. The remaining 23.5% were those who had committed violent offences (e.g., murder/manslaughter) or sexual offenses. Table 1 presents the general characteristics of community supervision admission from July 1, 2015 to June 30, 2016 and lists the offenses committed and the average ages and percentages of the population of interest that are under community supervision for those offenses. To more fully describe the characteristics of the target population, Table 2 was calculated to provide information on the percentage of crimes committed by non-violent offenders under community supervision during that same

period. Calculation divided percentages of those from the whole population who met criteria by the sum of those percentages (74.9%).

Table 1.

General Characteristics of Community Supervision Admissions from July 1, 2015 to June 30, 2016

Category	FY 2012-13	%
Total Admissions	83,176	100.0
Gender		
Males	60,280	72.5
Females	22,896	27.5
Race		
White	52,319	62.9
Black	24,944	32.4
Other	3,885	4.7
Data Unavailable	28	

The above tables copied with permission from Florida Department of Corrections Annual Report (see Appendix D).

Table 2.

Percentage of Crimes Committed by Non-violent Offenders Under Community Supervision

Category	100.0%
Robbery	4.6
Burglary	13.1
Theft/Forgery/Fraud	36.6
Drugs	30.6
Weapons	3.7
Other non-violent	11.4

Note. This table was calculated using Florida Department of Corrections community supervision statistics.

Sampling and sampling procedures. The sample was a convenience sample of offenders obtained from reentry programs. It was not within the scope of the study to obtain a probability sample. The sampling strategy was to gain a sample of convenience from facilities where felony offenders who were on community probation who would

have access to the flyer as they came into the buildings. This approach was expected to be within the possible domain of approaches that would result in a sample that would represent the population as the participants would be volunteers who indicated that they were part of the population before they were allowed to take part in the study.

Burkholder (n.d.) reported that for the population to be represented there was a need for a large sample size. If the sample size was substantial, there should be a better chance of representing the non-violent offender population. Burkholder also reported that there was a need for a large enough sample so that if a relationship among the variables being researched exists, it would be detected. He goes on to report that 0.80 is acceptable power to detect a relationship among the variables that would be considered real (not spurious).

A power analysis to determine an appropriate sample size was carried out using the statistical program, G*Power (Faul, Erdfelder, Buchner, & Lang, 2009), using an average of the standard deviations obtained from two similar studies on the psychometric properties of the PICTS (Walters, 1995a; Walters, Elliot, & Miscoll, 1998). The level of power used in this analysis was .80 with an expected effect size of modest ($r = .30$; Walters, 2013) and an acceptance of a type one error at 0.05. The outcome of the analysis suggested a sample of 64 analyzable subjects. However, to be conservative, the number of participants for this study was set at 75 (Faul, Erdfelder, Buchner, & Lang, 2009).

Procedures for recruitment, participation, and data collection. In order to obtain a sample representative of the population of interest, program directors of facilities that assist non-violent felony offenders were contacted to obtain permission to promote

the study to felony offenders (Appendix E). Once permission had been obtained, the participants were recruited from non-violent offenders on probation and directed to a website to complete the survey to participate in this study, which should have taken 15 – 30 minutes for each person. The recruitment flyer offering the opportunity to volunteer was posted at the facilities and explained the inclusion and exclusion criteria (Appendix B). It clearly stated that to be eligible to volunteer they must have been released from prison or jail, be on probation, and be over18 years old. It also explained that offenders would not be eligible to volunteer if they had ever been convicted of a serious violent crime (e.g., murder, rape, armed robbery, sexual offense). Each participant then went to the website and completed the consent form and survey on the SurveyMonkey website.

The consent form informed them that they were taking part of their own free will and that they could stop taking part at any time with no penalties. Once the participants completed the consent forms then the survey questions were presented. No further contact was required.

Data collection. When the participant went to the Survey Monkey link provided on the flier, the eligibility questionnaire appeared (see Appendix A). Participants who did not meet eligibility criteria were presented with a screen thanking them for their participation and instructing them to exit the computer, otherwise they proceeded to an Informed Consent form requesting that they agree to take part in the study by clicking to indicate an electronic signature (see Appendix C). Once they indicated agreement with this, they were advanced to the questionnaires.

Instrumentation. The assessment instrument that was used to measure the criminal thinking styles of the participants was the PICTS (Walters, 2013), developed over the period of 1995 to 2013 and first published in 2001 by the Center for Lifestyle Studies, Allentown, PA. Permission was requested from and given by the developer to use this measure and can be found in Appendix F.

The PICTS was the appropriate measure for this study because it has been shown to be one of the best measures for measuring criminal thinking styles in the forensic population (Walters, 2012). Walters (1995a) developed it to determine the relationships between criminal thinking styles and recidivism. Criminal thoughts included concepts like blaming society, giving up caring what happens when they committed a crime, degree of poor life planning, trouble following through with plans, feeling justified in breaking the law, believing they had a right to control others, believing they would be uncatchable, or feeling they were not hurting others in their criminal actions. The PICTS has been found to be time-efficient, and sufficiently brief for offenders to complete. Test-retest reliability for the PICTS was adequate with the different scales returning test-retest Pearson product-moment correlations ranging from $r = .73$ to $r = .85$ over a two-week interval (Walters, Elliot, & Miscoll, 1998). The 12-week test-retest correlation coefficients were still acceptable, ranging from $r = .57$ to $r = .72$ (Walters, 1995a). These correlations were obtained from 50 male medium security federal prisoners and 20 female federal inmates.

Walters (2013) reported that the internal consistency of the PICTS was acceptable with Cronbach alpha coefficients ranging from $r = .82$ to $r = .96$ which indicated that

items within the measure were focusing on the same issue. Internal consistency was established using correlations obtained from a sample of 3037 male medium security federal prisoners and 227 female state and federal inmates.

The items on the PICTS appear to be measuring constructs that reflect those described by Walters (1995a) and therefore have a degree of face validity. The way the items are presented seem to reflect the constructs being measured. The PICTS is an 80-item self-report measure of criminal thinking styles in a forensic population. There are two scales to measure response style and whether the respondent is providing valid responses. The confusion scale is designed to measure the degree a respondent is faking bad or "yea-saying" with the intent to malinger with questions that are rarely endorsed by normal responders (Walters, 1995b). The defensiveness scale is designed to measure the degree the respondent is attempting to fake good to create a favorable impression of themselves by denying ordinary human responses and concerns (Walters, 1995b).

The concurrent validity correlations of the PICTS in the manual are based on the relationships between responses to the measure and previous arrests. These correlations range from $r = .04$ to $r = .22$ (Walters, 2013). In that this measure is primarily to do with thought processes, concurrent validity was examined by evaluating and finding moderate correlations (Morgan, 2010) between the PICTS and the Criminal Sentiments Scale-Modified *(CSS-M*; Simourd, 1997). The CSS-M is a five-scale, 41-item self-report measure of antisocial attitudes, values, and beliefs related to criminal behaviors. The results indicated moderate correlations between three of the *CSS-M* scales and the PICTS criminal thinking styles, higher-order, and general criminal thinking scales (Morgan et

al., 2010) using 114 incarcerated federal male offenders. This provides a degree of concurrent validity. Walters (2001) carried out a study using 417 minimum, medium and maximum security male prisoners and found significant relationships between the scales of the PICTS and past criminality showing that the relationships were significant, ranging from r = -.32 to r = .29 with the Historical content scale providing the best estimate of a participant's criminal behavior (r = -.32). In the current study, no other measures were utilized for the purpose of reestablishing validity other than reporting the relationships between the PICTS scores and the criterion variables.

The PICTS scale scores are considered interval level of measurement as they have been administered to a large sample of felony offenders and scores have been determined to follow a normal distribution. The PICTS manual contains normative data on the scores from this measure and were used to establish that the sample was representative on the constructs being measured (Walters, 2013).

Operationalization of variables. The dependent variable of recidivism measured as the self-reported number of legal infractions committed after first release from jail/prison was investigated using the independent or predictor variables of criminal thinking styles represented by scores of the scales from the PICTS. The scoring for the PICTS scales was done using the guidelines from the test manual and updates published by the test developer (Walters, 1995a; Walters & Lowencamp, 2015). The ten levels of the predictor variables on the PICTS scale scores and combinations of scale scores are presented in Table 2. These include three higher order constructs, which are the sums of specific scores for criminal thinking styles: general criminal thinking-reconstructed

(GCT-RC-rc*)*, proactive criminal thinking (PCT), and reactive criminal thinking (RCT), mollification (Mo), entitlement (En), power orientation (Po), superoptimism (So), cutoff (Co), cognitive indolence (Ci), and discontinuity (Ds). (Walters, 2013).

The score for GCTrc has changed from its original conceptualization when the PICTS was first constructed. Since 2011, the GCT-rc is obtained by summing the PCT and RCT scale scores and is the highest level of criminal thinking styles measured by the PICTS. Originally, the GCT-rc scale was made up of 64 items but, because, in an analysis of responses from 2872 inmates released from a medium security federal correctional institution in which the Sentimentality scale did not load onto the GCT-rc factor, the GCT-rc was altered (Walters, Hagman, & Cohn, 2011). The new scale, the GCT-rc eliminated the Sentimentality scale so that now it is made up of a total of only 56 items. This new scale is a more reliable, valid, and sensitive scale than the previous GCT-rc in its detection of criminal thinking styles as defined by this measure.

According to Walters (2013), more than 20 omitted items would be an acceptable cut-off point to remove any participant's data from the dataset. According to Walters (2013), any participant's data should be removed from the data set that have high fake bad and defensiveness-revised scale response scores. A fake bad response set was measured using the confusion-revised scale and a T-score between 65 and 80 suggests that criminal thinking style, factor, content and higher-order scales would have scores that are higher than are real (Walters, 2013). The Defensiveness-revised scale score of 55 to 65, although would not invalidate the responses, indicates that the aforementioned scales would be lower than are real (Walters, 2013).

In that the objective of this study was to determine whether or not there was evidence to support the theory that there is a positive relationship between criminal thinking styles and recidivism, it was necessary to focus on the definition of recidivism as given by the National Institute of Justice (NIJ). The NIJ clearly interprets recidivism as criminal acts performed after release from incarceration (NIJ, 2008). The NIJ further explains that using the official records of arrest and conviction are poor measures to assess recidivism because many crimes go undetected. The current study has therefore operationally defined recidivism measured as the self-reported number of legal infractions committed after first release from jail/prison involving the authorities or not.

Table 3.

Predictor Variables: PICTS *Criminal Thinking Scales and Scores*

Predictor variable	*Abbr.*	Formula	Definition
General criminal thinking, reconstructed	*GCT-rc*	Mo+Co+En+Po+ So+Ci+Ds	Overarching score that reflects tendency to engage in criminal thinking
Proactive criminal thinking	*PCT*	Mo+ En+Po+ So	2nd order score that reflects the degree to which crime is planned in advance
Reactive criminal thinking	*RCT*	Co+Ci+Ds	2nd order score that reflects spur of the moment criminal thinking
Mollification	*Mo*	Sum of scale items	Blames others and their environmental circumstances for why they commit crimes
Entitlement	*En*	Sum of scale items	Believes that they are entitled to commit crimes to get what they want
Power orientation	*Po*	Sum of scale items	Attempts to control others v. exercising self-control
Superoptimism	*So*	Sum of scale items	Believes that they cannot be caught and will not suffer consequences for committing crimes,
Cutoff	*Co*	Sum of scale items	Thinks, "the hell with it" and not caring what happens when s/he commits a crime
Cognitive indolence	*Ci*	Sum of scale items	Ignores problems that might interfere with plans
Discontinuity	*Di*	Sum of scale items	Inability to stick to a plan

Note. From "The Psychological Inventory of Criminal Thinking Styles (PICTS) Professional Manual," by Walters, G. D., 2013.

Data analysis plan. Each person who decided to participate used a smartphone or computer to log onto https://www.surveymonkey.com/r/PICTS, where they completed

the eligibility section of the survey. If they did not meet the criteria for inclusion, they were thanked for their participation and the session ended. If they met eligibility, they then read and completed the consent form and electronically signed to indicate they wished to participate, at which point they were presented with the demographic questionnaire including the questions about recidivism followed by the inventory. The survey did not become part of the dataset until every response was made. Survey Monkey provided these responses in a data file that could be analyzed on computer using the SPSS. Responses to this questionnaire were summarized to establish that the participants' characteristics were representative of the target population and to obtain descriptive statistics on recidivism.

The participants were over the age of 18 with a mean age of 34.1 years (FDOC, 2010-2011). Representativeness of the sample was established using demographic questions on sex and race. The male to female proportion was reflective of the Florida felony offender population of 85/15 (FDOC, 2014). As socioeconomic status was not considered to be a variable that would be related to any of the variables, income level was not measured in this study. The percentages of each ethnicity of this group of participants was expected to be similar to the norm presented in table 1 but only white respondents completed the full survey.

Next the PICTS responses were entered into the **S**PSS and the mean, standard deviation, and skewness of the responses were calculated. There were no missing responses on this data collection because the volunteer was not able to advance to the next question without responding.

After analysis of the skewness of the responses, it was determined that there was insufficient evidence to accept that the data could be analyzed by a parametric test, so Spearman's correlation was used to examine the relationship between the variables. In that this study examines the relationship between PICTS criminal thinking styles and recidivism, it was hypothesized that scores from each of the PICTS scales would be correlated significantly with the self-reported recidivism. The PICTS was scored according to instructions in the manual and then the relationship with recidivism was analyzed by calculating Spearman's correlation.

Below, data analysis according to each research question is described:

RQ1: What is the relationship between general criminal thinking and recidivism for post-release non-violent offenders on probation?

H_0: There is no relationship between general criminal thinking and recidivism for post-release non-violent offenders on probation.

H_1: There is a relationship between general criminal thinking and recidivism for post-release non-violent offenders on probation.

The null hypothesis that there is no relationship between general criminal thinking and recidivism for post-release non-violent offenders on probation was tested by carrying out a Spearman's correlation. The values that were used to determine support for the alternative hypothesis that there is a relationship between general criminal thinking styles and recidivism for post-release non-violent offenders on probation were the scores from the PICTS *GCT-RC*-rc scale and self-reported recidivism obtained from responses to a question on the demographic questionnaire in the appendix.

RQ2: What is the relationship between proactive criminal thinking and recidivism for post-release non-violent offenders on probation?

H_0: There is no relationship between proactive criminal thinking and recidivism for post-release non-violent offenders on probation.

H_1: There is a relationship between proactive criminal thinking and recidivism for post-release non-violent offenders on probation.

The hypothesis that there is a relationship between proactive criminal thinking styles and recidivism for post-release non-violent offenders on probation was examined using Spearman's correlation. The values that were used to determine support for the alternative hypothesis that there is a relationship between proactive criminal thinking styles and recidivism for post-release non-violent offenders on probation were the scores from the PICTS proactive criminal thinking scale and self-reported recidivism totals obtained from responses to the questions on the demographic questionnaire.

RQ3: What is the relationship between reactive criminal thinking styles and recidivism for post-release non-violent offenders on probation?

H_0: There is no relationship between reactive criminal thinking and recidivism for post-release non-violent offenders on probation.

H_1: There is a relationship between reactive criminal thinking and recidivism for post-release non-violent offenders on probation.

The hypothesis that there is a relationship between reactive criminal thinking and recidivism for post-release non-violent offenders on probation was examined using Spearman's correlation. The values that were used to determine support for the

alternative hypothesis that there is a relationship between reactive criminal thinking styles and recidivism for post-release non-violent offenders on probation were the scores from the PICTS reactive criminal thinking scale and self-reported recidivism obtained from the responses to a question on the demographic questionnaire.

The relationships between the predictor and criterion variables were analyzed using Spearman's correlation. When determining whether the relationships being examined were significant, the standard alpha was set at the level of .05, which is the most common level used in psychological research studies (Burkholder, n.d.). Using the alpha level set at .05 allowed a 5% chance for error.

Significant correlations between the independent and dependent variables in this study would have supported the theory that criminal thinking styles are related to recidivism for non-violent felony offenders. A positive relationship would have indicated that higher scores would be related to more reports of recidivism and lower scores would be related to fewer reports of recidivism.

Threats to validity. External validity is the degree to which one can generalize the relationships found in the current sample to other samples taken from the target population at other places and times (Stangor, 2011). The target population was non-violent offenders currently on probation; therefore, the reader is instructed to make inferences only about this population rather than attempting to generalize to a population including violent offenders or sex offenders.

One of the threats to external validity was reactivity, a feeling that answering honestly would be unwise. This occurs when participants change their responses because

they believe true responses would negatively influence their situation (Heppner, Wampold, & Kivlighan, 2008). To make sure that this was minimized, the introductions on the flyer stated that the responder's name would not be on the response form and therefore would have no effect on their legal situation. Another threat to external validity was specificity, the inability of the items to be specific enough to accurately measure the construct of interest (Fronkfort-Nachmias & Nachmias, 2008). Regarding this threat, every effort was made to minimize specificity by selecting the best and most up-to-date measure of the constructs under investigation. Another threat to external validity was interaction between selection of participants and the variables of criminal thinking styles. This means that the participants may respond differently because they know that certain responses could be expected, and this threat was controlled by reminding the participants that their responses would have no identifying information indicating where the information was obtained or from whom. This relationship was statistically investigated by looking for the relationship between the measures (Field, 2009).

An additional threat to internal validity in testing reactivity was that non-violent offenders on probation may have been disinclined to respond honestly on the questionnaires for a variety of reasons. Bearing this limitation in mind, the PICTS, in particular, has been improved over the typical self-report measure in that questions have been added to determine whether the responder is randomly answering questions or malingering. A fake bad response set is measured using the confusion-revised scale and a T-score between 65 and 80 suggests that thinking style, factor, content and higher-order scales would have scores that are higher than are real (Walters, 2013). The

Defensiveness-revised scale score of 55 to 65, although would not invalidate the responses, indicate that the aforementioned scales would be lower than are real (Walters, 2013). No fake bad or defensiveness-revised scale response scores were outside the above T-score ranges.

Potential threats to both external and internal validity was decreased due to the fact that the PICTS has high internal consistency with Cronbach alphas ranging from .61 - .94 and .54 - .93 for males and females, respectively. Test-retest reliability is also acceptable with 2-week stability exceeding $r = .70$ for males and for females (Walters, 2013). Using this measure in this study was reasonable because the PICTS has concurrent validity as indicated by the correlations between this measure and measures of past criminality on responses from 415 male minimum, medium, and maximum-security felony offenders ranging from a low of .06 on single scales to .22 on composite scales (Walters, 2013). Content validity was assessed by focus groups made up of inmates and professionals in the field and item were verified to be relevant (Walters, 2013). As with all measures, it is accepted that more research should be carried out as to the construct validity of this measure.

For other questionnaires that measured demographic characteristics of the participants and whether they met inclusion criteria for the study was taken at face value, and this was a limitation. There was no easy way to validate participants' responses on these questionnaires while still maintaining confidentiality.

Ethical procedures. Some ethical issues were addressed in this research study. The flyer asked if potential participants would be willing to voluntarily participate in a

research study. In that the participants might feel that they have no choice but to participate in the research, it was very important to emphasize to all that there was no requirement to take part nor would there be repercussions should they choose not to take part or opt out once they get started. It was also very important to insure anonymity and confidentiality of the participant's names and of their responses.

Each participant signed a consent form online indicating that they understood that no names would be taken nor would their private information be recorded. The informed consent consisted of an invitation to the study with inclusion criteria of age and probation status. It introduced the researcher and the purpose of the study. Next, it explained the procedures that the participant should follow. Participants were reassured concerning the voluntary nature of the study, and the risks and benefits of their participation were presented. It was clarified that privacy consisting of anonymity and confidentiality would be maintained. The researcher's email address was provided along with the IRB approval number and contact at Walden if they had any further questions or concerns.

The responses were not used for any other purpose than for the present study. All data collected has remained secure in a private home office password guarded computer and will be for seven years when they will be deleted. The only people who may access the data are the dissertation committee members. At their request, data will be available for transfer from my home office to their office where they would be secured. Names were not taken when the survey was completed by the participant.

IRB approval was obtained for this proposal on February 6, 2019 and the IRB approval number was 02-06-19-0197091.

Summary

This chapter focused on the proposed methodology to examine the relationships between the independent variables of criminal thinking styles and dependent variable of recidivism of non-violent offenders who were on probation. Research questions and hypotheses were presented with research design along with a rationale for that design. The population was described using tables that summarize demographic variables. Inclusion and exclusion criteria for participants were explained. The sampling strategy and power analysis were also presented. The procedures and data collection were covered describing how the program director of the facility would be approached with a letter and in-person and how potential participants would be obtained after the program director had given permission to access potential participants. A description of where and how each participant would complete the questionnaires was provided along with all psychometric information on the PICTS measure, including reliability and validity coefficients and information about where normative data could be obtained.

This chapter has summarized the research questions and the quantitative research methods used for this study. The operational definitions for each variable were clearly laid out. Actions to improve the validity of the data collected were described and a more detailed description of the dependent variables was provided. In the data analysis plan, a specific data collection and analysis plan were laid out with specific statistical tests related to the hypotheses reiterated in the data analysis section. To provide a critical viewpoint on this research approach, a section was added to enumerate the threats to its

validity and what steps were to be taken to minimize these threats. The chapter ends with a discussion of ethical considerations.

The next chapter presents the results of the study. The purpose, research questions, and hypotheses are followed by a description of the data collection time frame, recruitment rates and response rates. Any discrepancies from the plan presented in chapter three are presented along with descriptive and demographic characteristics of the participants enrolled in the study. The comparison to the target population is presented in a table and univariate analyses justifying use of this sample in the study is given. Assumptions about the statistical analysis are evaluated and findings reported stating whether or not the research hypotheses were supported. The chapter also reports the specific relationships between the predictor and criterion variables, which were analyzed using Spearman's correlation.

CHAPTER 4: RESULTS

Introduction

The purpose of this study was to determine whether there is evidence to support the theory that there is a positive relationship between criminal thinking styles of non-violent offenders on probation and recidivism, as defined by the NIJ (2014). The research questions investigated the relationship between the PICTS General Criminal Thinking scale scores (GCT-rc) and recidivism, the Proactive Criminal Thinking subscale scores (PCT) and recidivism, and the Reactive Criminal Thinking subscale scores and recidivism.

The following paragraphs include information on the collection of the survey data and the results from analysis of that data. Ethnicity, gender, and number of crimes committed after first release are reported. Information that supports the assumptions of the statistical analysis, reliability, independent relationships of the measures with recidivism, and the findings of the tests of the research hypotheses are followed by the interrelationships between all of the scales and subscales.

Data Collection

Participants were obtained by displaying fliers to non-violent offenders, on probation, who visited a reentry cooperative in Hillsborough and Pinellas Counties in Florida. The objective was to obtain 75 participants. However, in the allotted time, 24 started the survey but 15 either did not qualify to continue or they stopped participating. This resulted in a sample of 9 who completed the entire survey. Each participant who

wished to complete the questionnaire used his or her smartphone/computer to complete the demographic questionnaire, self-report on recidivism, and to respond to the PICTS.

Because nonprobability sampling was used to obtain the participants, confirmation that the sample was representative was done by comparing the proportions of males and females to the general characteristics of the population. The comparison of races was not feasible. Expected percentages of the characteristics of the sample are presented in Table 4 and provide information on demographics of those non-violent offenders under community supervision.

Table 4.

General Characteristics of Community Supervision Admissions from July 1, 2015 to June 30, 2016

Category	Sample Demographics	Percentages	X^2 Statistic
Total Admissions	75	100.0%	
Gender			
Males	56	72.5%	0
Females	19	27.5%	0
Race			
White	47	62.9%	0
Black	24	32.4%	0
Other	4	4.7%	0

Note. Information obtained from "2017-2018 Annual Report" Florida Department of Corrections http://www.dc.state.fl.us/pub/annual/1718/FDC_AR2017-18.pdf

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Ethnicities did not accord with the general jail/prison population (approximately 63% White) in that all participants who fully completed the survey reported that they were white. The proportion of male to female participants, as expected, was three females to six males, as reflects the jail/prison population reported in the Florida Department of Corrections Annual Report (2018). Chi-square goodness-

of-fit tests for gender indicated that the sample was representative of the population reported in Table 4 (X^2 (2, N = 9) = 0.154, p = .695).

The number of items in each scale of the PICTS and the expected Cronbach alpha coefficients for the scales from the PICTS are reported in Table 5. Information for the expected values for each outcome of Table 5 is from the PICTS manual (Walters, 2013).

Table 5.

Reliability Indices Expected for Each Scale and Subscale

Category	Number of Items	Cronbach's α
GCT-rc	56	.95
PCT	32	.94
Mollification (Mo)	8	.93
Entitlement (En)	8	.93
Power Orientation (Po)	8	.93
Superoptimism (So)	8	.93
RCT	24	.94
CutOff (Co)	8	.93
Cognitive Indolence (Ci)	8	.93
Discontinuity (Ds)	8	.93

Study Results

Mean, standard deviation, skewness, kurtosis for each variable are reported in Table 6 along with the Cronbach's alpha for both male and female. Table 6 also shows the mean, standard deviation, skewness, and kurtosis of the self-reported number of crimes committed after first release from jail/prison (recidivism). The distribution of the responses by the non-violent offenders on probation to the question asking about the number of crimes they have committed after release, ranged between 0 and 15.

Table 6.

Means, standard deviations, skewness, kurtosis, and Cronbach α for the PICTS *scales and subscales (n = 9).*

	Mean	SD	Skew	Kurtosis	Cronbach's α	
					Male	Female
GCT-rc	111.56	46.56	1.52	1.89	.96	.99
PCT	60.33	30.85	1.56	2.15	.93	.99
Mollification	15.56	8.22	1.18	.39	.94	.98
Entitlement	14.11	7.57	1.90	4.08	.68	.99
Power Orientation	14.44	8.78	1.39	.84	.93	.99
Superoptimism	16.22	7.12	1.65	2.38	.78	.97
RCT	51.22	16.07	1.36	1.13	.91	.98
CutOff	17.89	4.98	1.19	-.14	.67	.53
Cognitive Indolence	17.78	5.95	.78	.08	.74	.78
Discontinuity	15.56	6.04	1.64	2.46	.54	.84
Recidivism	4.11	5.30	1.32	.96		

Note. GCT-rc = General Criminal Thinking-reconstructed, PCT = Proactive Criminal Thinking, RCT = Reactive Criminal Thinking.

In keeping with the hypothesis that scores from GCT-rc, PCT and RCT of the PICTS scales would correlate significantly with the number crimes committed after first release, it was intended that Pearson's product-moment correlation analysis would be carried out. However, because the sample was very small and the data was skewed as can be seen in Figure 1, it was decided that it would be more appropriate to use the nonparametric approach of Spearman's correlation.

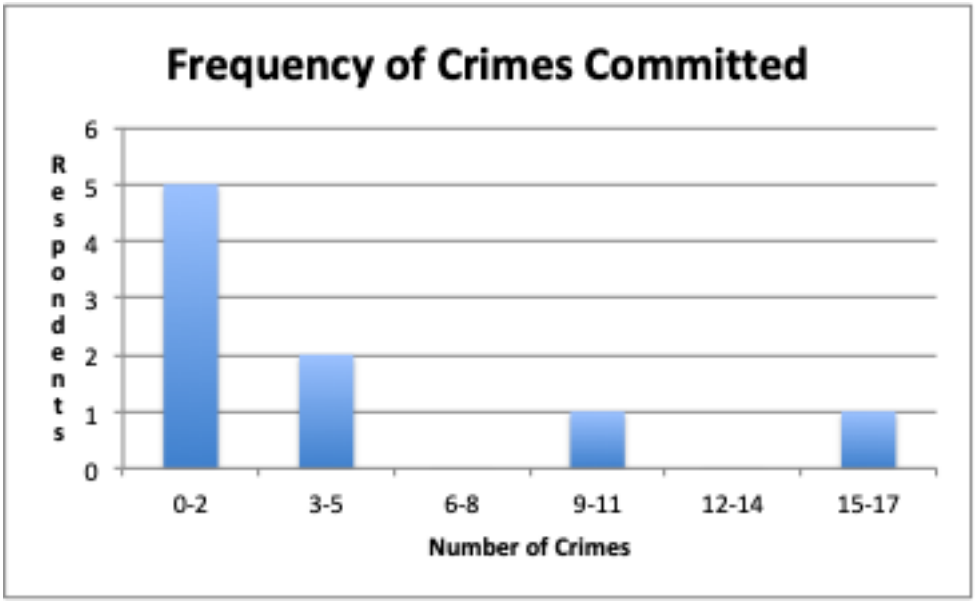

Figure 1. Frequency of crimes self-reported by non-violent offenders on probation.

Because this study is correlational, no treatment was involved. Independence of the responses is assured by the design of the study; no participant was told of another participant's involvement in the study. Skewness was calculated and the normality of each variable was not established: except for cognitive indolence, every response was determined to be outside the limits of -1 and 1 (Osborne & Waters, 2002). Linearity and homoscedasticity of variability in the relationships was determined using scatterplots (see Figures 2, 3, and 4; Keith, 2006). The relationships appear to be positive and linear with random scatter that are not curvilinear.

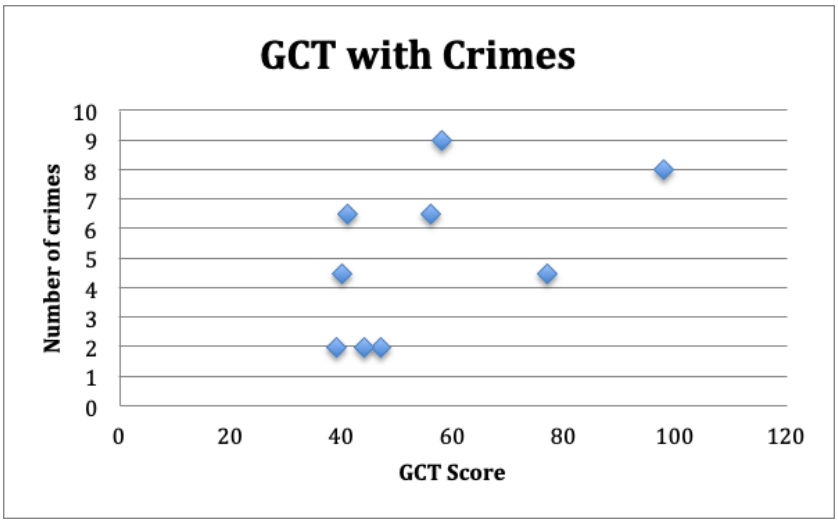

Figure 2. Scatterplot of General Criminal Thinking scores with recidivism.

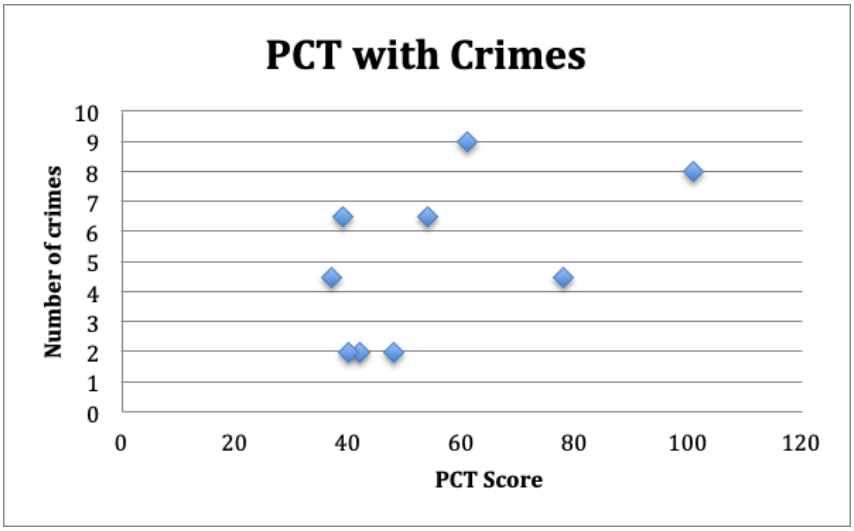

Figure 3. Scatterplot of Proactive Criminal Thinking scores with recidivism.

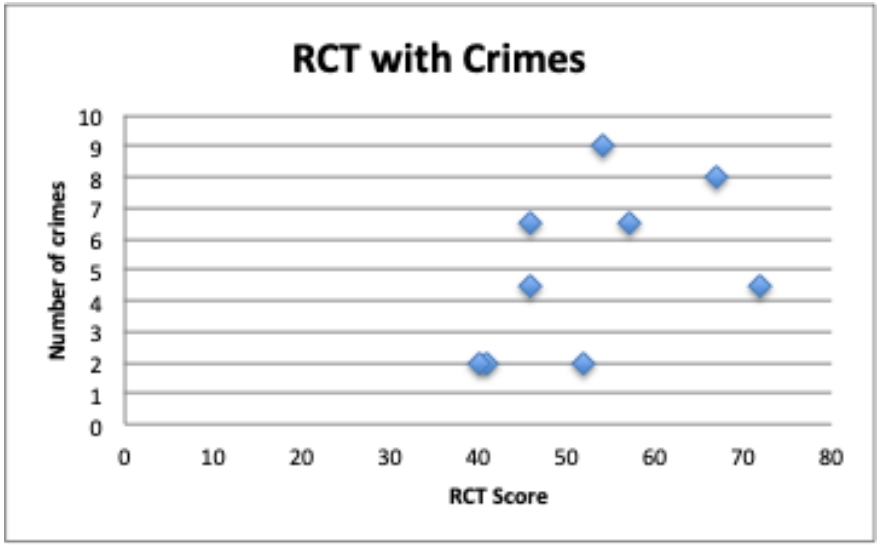

Figure 4. Scatterplot of General Criminal Thinking scores with recidivism.

Table 7 presents a matrix of Spearman product-moment correlation coefficients indicating the inter-scale relationships and the relationships of PICTS scale and subscales using a Spearman's correlation with recidivism that were relevant to this study. The relationships between GCT-rc with recidivism, PCT with Recidivism, and RCT with recidivism are shown in the lowest row of the table along with the relationships of each of the other scales with recidivism. Except for the relationships between the cutoff and mollification scores and cutoff and super-optimism, which were not significant, the relationships between all scales and subscales of the PICTS were significantly correlated at an alpha of .05 as was reported in Walters (2013).

Table 7.

Bivariate Correlations Between the Scales, Subscales, and Recidivism.

	GCT-rc	PCT	RCT	Mo	En	Po	So	Co	Ci	Ds
PCT	.99**									
RCT	.99**	.85**								
Mo	.95**	.95**	.89**							
En	.98**	.98**	.99**	.86**						
Po	.94**	.94**	.96**	.89**	.94**					
So	.90**	.96**	.96**	.93**	.97**	.96**				
Co	.69*	.69*	.78*	.47	.80**	.68*	.65			
Ci	.95**	.95**	.93**	.85**	.95**	.85**	.94**	.73*		
DS	.96**	.94**	.90**	.77*	.84**	.88**	.79*	.77*	.71*	
Recid	.45	.45	.40	.54	.40	.54	.50	-.06	.40	.18

Note.*p < .05, **p < .01. GCT-rc = General Criminal Thinking reconstructed, PCT = Proactive Criminal Thinking, RCT = Reactive Criminal Thinking, and Recid. = Recidivism.

The lowest row of table 7 above shows that the three hypotheses of the study were not supported by the data obtained. The correlations between GCT-rc and recidivism, PCT and recidivism, and RCT and recidivism were not significant (rs = .45, p = 0.221, rs = .45, p = 0.221, and rs = .40, p = 0.293, respectively).

Summary

In summary, the responses to the requests for participation were fewer than one half of the number required to obtain power enough to determine a significant correlation between the GCT-rc and recidivism, PCT and recidivism, or RCT and recidivism. Except Cutoff, the Cronbach's αs for each scale and subscale of the PICTS showed either good or excellent internal consistency but the responses to the question about crimes committed after first release were skewed such that it was appropriate to run Spearman's correlation to analyze the data. The scatterplots and computations did not indicate support

for any of the hypotheses; there was no significant relationship found between any of the predictor variables and recidivism.

Chapter 5 discusses the limitations, recommendation for future studies, and implications of positive social change in light of these findings.

CHAPTER 5: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This quantitative, correlational study addressed the relationship between criminal thinking styles, as measured by the PICTS, and recidivism. Recidivism was measured by asking the participant to respond to the following question: After your first felony arrest, how many times have you committed a crime? It was posited that there would be a relationship between criminal thinking styles, as measured by the PICTS, and their self-reported recidivism in non-violent felony offenders. Developing a better understanding of recidivism in non-violent offenders would enable forensic mental health professionals to better determine the likelihood of reoffending. Unfortunately, due to the small number of participants, statistical significance was not obtained. However, the effect size indicated the likelihood that there is a relationship between criminal thinking and recidivism in non-violent offenders. However, no further evidence supporting the research hypotheses was found. .

Interpretation of the Findings

The findings of this research suggest that, although the hypotheses were not supported by the data analysis, additional participants would increase statistical power and could support a significant relationship. Because no significant relationship was established between the predictor and criterion variables and because the data were ranked, it was inappropriate to use a regression analysis for this study.

Previous meta-analyses (Gendreau, Little, & Goggin, 1996; Little, 2001, 2005; Van Vugt et al. 2011) indicated that the studies that had been carried out used prison

inmates and that the operational definition of recidivism was based on conviction rather than on self-reported criminal activity. This study revealed that the population of those who are on probation will report having committed criminal acts if assured that their responses are anonymous. However, the small number of participants may be due to concern about negative consequences if they admitted to all criminal activities.

The study excluded offenders under age 18 and those who had been convicted of a violent charge, such as murder, or a sex offense. It also excluded those with severe mental health diagnoses. This may have further reduced the participant pool.

This study received minimal responses (n = 9) from the facilities approached. The effect size, as measured by the absolute magnitude of the Spearman's correlation coefficient for each of the outcomes of the analyses, were moderate for each of the three outcomes (*es* = .45, .45, and .40, respectively). The hypotheses that there would be a significant relationship between GCT-RC, PCT, or RCT and recidivism, however, were not supported by the nonparametric Spearman's correlation coefficients (p = .221, .221, and .293, respectively).

Ellis' (2001) suggestions that problematic beliefs and irrational thoughts can lead to deviant behaviors were not supported in these findings. Similarly, the statement made by David et al. (2010), that irrational and negative beliefs leads to irrational and negative behaviors, was also not supported.

Limitations of the Study

There were several limitations of this study. One was that the data was collected using self-report measures, the advantage being that this approach enables the efficient

assessments of the constructs being studied: criminal thinking styles and recidivism (Lunsford, 2009). The disadvantages include: (a) inability of items included in the protocol to encompass every possible behavior of the participant (b) the truthfulness of the responder because of denial or avoidance, (c) participant concern about admitting to previous criminal behavior, (self-serving bias or social desirability), (d) inability of those with impaired reading ability to comprehend the items of the protocol, (e) tendency of a participant to not answer in a forthright manner, (f) the participant may not have felt that the forced-choice categories apply , (g) or the participant may not remember committing additional crimes due to substance abuse, and (h) the possibility that the level of awareness of past thoughts, feelings, and behaviors would be out of the awareness of the person responding (Sallis & Owen, 1999).

An attempt to address these disadvantages included using a measure with items that had high reliability. In addition, the protocol was written at the 6th grade level (Walters, 2013). To avoid the bias of social desirability, no personal identification was collected. In addition, the instructions on the survey reminded the participants that no personal information would be shared and that no repercussions would result from their responses. They were also reassured that the data would be reported as group data.

The findings of this study cannot be generalized to the larger population of non-violent offenders on probation because the sample size was too small (n = 9) to detect a significant relationship between the predictor and criterion variables. The data collected on the PICTS reflected the responses that have been shown in Walter's (2013) manual and can therefore be considered trustworthy. However, the responses concerning

recidivism of criminal behavior should be considered less reliable as they are self-report responses and may not accurate. The threat to external validity of specificity, the inability of the items to be specific enough to accurately measure the construct of interest (Frankfort-Nachmias & Nachmias, 2008) may apply here because the question concerning recidivism was very broad and required the participant to think of his or her behavior as criminal and then remember how many of these behaviors had been carried out. Because the sample was a sample of convenience instead of a probability sample, there may have been many who refused to take part in the study. Clearly, this population was underrepresented in such a small sample.

It is also possible that external validity could be affected by the fact that participants reacted by telling what they perceived the questionnaire was focusing on and hence gave responses that they felt would please the researcher. Although this was controlled by reminding the participants that their responses would have no identifying information indicating where the information was obtained or from whom, there still may have been a belief there would be negative consequences for the responses that indicated more criminal behavior.

Reliability of the study can be assessed by the design carried out to obtain the data. The recidivism rate was measured by one-question and therefore analysis using Cronbach's alpha was inappropriate.

Recommendations

This study did not indicate that criminal thinking styles are related to recidivism; however, the effect size suggests that further research could be carried out to determine if with a larger sample size, a significant relationship might be found.

Future research in this area might want to examine the effect that criminal thinking styles have on recidivism. A longitudinal study that includes an intervention component might be used to determine if changes in thinking style might impact changes in behavior. This could show that change in criminal thinking styles over time would influence the criminal behavior of an individual. The limitation of using one question to measure recidivism could be addressed by the creation of a questionnaire that measures recidivism based on the definition given by the National Institute of Justice (2014). The creation of this measure would enable an in-depth investigation of behaviors that the participant could report that may reveal information not collected in the current study. This could possibly increase the specificity enough to accurately measure the construct of interest (Frankfort-Nachmias & Nachmias, 2008).

The delimitation of using only non-violent offenders who are on probation could be dropped for future studies to determine whether people who have not been arrested or convicted would admit to repeated offenses, therefore linking scores on the PICTS with recidivism defined as the repetition of crimes (either convicted or not). This would enable the sample to be randomly selected, which could give more validity to the findings.

Implications

Because there were no significant findings in this study, there is no potential impact for positive social change at the individual, family, organizational, societal or policy level. Although theory suggests that there may be significant findings to be found, the sample size in this study did not provide sufficient power to establish a relationship from which to make any implications.

Conclusion

The purpose of this study was to establish whether there was a relationship between criminal thinking styles and recidivism in non-violent felony offenders on probation by asking them to complete the PICTS and compare level of criminal thinking and recidivism. The hypothesis was that a significant relationship would be found between scores on the PICTS and the frequency of criminal behaviors. Although the findings were not significant a larger sample size with higher power may have produced significant results. It is important for the criminal justice system and forensic mental health services gain a better understanding of the relationship between criminal thinking styles and recidivism. This understanding will assist them in the development of intervention strategies to further reduce recidivism.

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Appendix A: Eligibility

Please read each statement and place a check in each box before signing and dating this form

☐ I am between the ages of 18 and 65.

☐ I am on probation.

☐ I have never been convicted of a serious violent crime or sex offense.

☐ I have never been diagnosed with schizophrenia, dissociative disorder or any serious mental illness with a thought disorder.

Appendix B: Recruitment Flyer for Participants

Who answers for you?

When researchers want to know about your thoughts, they ask probation officers, prison guards, or police!

Why not ask you???

using your smartphone

Would you take a15 minute survey that might help people understand people on probation?

Very few studies have asked questions of people on probation. If you are between 18 and 65, are on probation, have NOT been convicted of a violent crime or been diagnosed with a mental disorder by a doctor,

please use your smartphone to go to surveymonkey.com/r/PICTS

and respond to the survey questions. Your name will not be asked so no one will even know you were the one to answer –there is no way to track the answers back to you. I hope you decide to take survey. Thanks.

Appendix C: History

Male___ Female ___ Age____ Today's Date ___/_____/_____

Ethnicity (optional): Caucasian or White _____ African American or Black ____

Hispanic American or Latino _____ Asian American, Asian, Pacific Islander _____

American Indian or Alaska Native _____ Multiracial _____ Other _____

After your first felony arrest, **how many times have you committed of a crime?**

This number should include any crimes committed even if they were not reported to the authorities. Please remember this information cannot be traced back to you.

Appendix D: Permission from DOC to publish information

Subject: Dept of Corrections Annual Report FY12-13
Date: Monday, August 8, 2016, 4:03 PM

You may use any of the pages in
any of the annual reports as needed. There are also
statistical pages on the web site that might provide
additional information that is not
in the printed version.

http://www.dc.state.fl.us/pub/annual/1213/stats/im_admis.html
- link to the section you referred
to in your message

http://www.dc.state.fl.us/pub/index.html
- link to all annual report statistical pages by fiscal
year

Good Luck,

Department of
Corrections
Bureau of Research & Data

Appendix E: Letter for facilities being approached

To Whom It May Concern:

My name is Louise Mitsianis and I am a doctoral student pursuing my PhD in Forensic Psychology. I am hoping that you will be able to help me in my research efforts as I am attempting to obtain a sample of men and women who are on probation who would complete an anonymous questionnaire online. My objective is to discover whether there is a relationship between criminal thinking styles and self-reported recidivism. The survey does not ask the participant for their name or any other identifying characteristics so their answers could not be traced back to them but the answers to the questions will provide professionals who give help to probationers more knowledge about the way thoughts and beliefs are related to recidivism.

Offenders are eligible to volunteer if they:
Are over the age of 18 and are on probation.

Offenders are not eligible to volunteer if they:
Have been convicted of a violent crime or sex offense.

I would greatly appreciate your cooperation in allowing me to recruit volunteer participants from your agency. I will share a copy of my dissertation with you upon

completion if you request it. I can be reached with questions at:

louise.mitsianis@mail.waldenu.edu or

Yours truly,

Louise Mitsianis, M.A., MCAP/AODA, IC & RC, RMHCI-9980

Appendix F: Permission for PICTS

On August 16, 2015, I was granted permission from Glenn D. Walters, PhD to use his measurement the PICTS for research purposes.