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# Evaluating the effectiveness of Moral Reconciliation Therapy with the juvenile offender population

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Evaluating the effectiveness of Moral Reconciliation Therapy® with the juvenile offender  
population

by

Courtney L. Behrens

A dissertation submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of

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2009

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## ABSTRACT

This study aimed to evaluate the effectiveness of Moral Reconciliation Therapy® (MRT) with the juvenile offender population in regard to the effects on recidivism. The analyses resulted in no significant differences in recidivism between the treatment group, which consisted of 375 juvenile offenders who participated in MRT, and the comparison group, which consisted of 375 juvenile offenders who did not participate in MRT. Specific attention to the number of MRT steps completed in relation to recidivism also resulted in no significant results. Therefore, recidivism did not change based on the number of MRT steps completed. In addition to analyses to determine the effectiveness of MRT, analyses to study the ability of the Juvenile Crime Prevention Risk Assessment (JCP Risk Assessment) to predict recidivism were included. Specifically, the total number of risk indicators and the total number of protective factors within the JCP Risk Assessment each were significantly related to recidivism. To determine possible moderating effects, gender and race were included for the following analyses: (a) the number of MRT steps completed and recidivism, (b) the total number of risk indicators and recidivism, and (c) the total number of protective factors and recidivism. The addition of race and gender did not provide significant results for the number of MRT steps completed and recidivism. For the JCP Risk Assessment, the interaction terms, which included race and gender separately with risk indicators and protective factors, the contribution of all independent variables, and the interaction term, led to significant variation in recidivism. However, no interaction terms accounted for a statistically significant amount of variance in recidivism. This study did not provide for support of the effectiveness of MRT with the juvenile offender population of interest.

## INTRODUCTION

[T]he judge said that because of my crime and he said it was a well thought out that I deserved the life without [parole]. That means I'm gonna die here. I definitely know I deserve punishment, I mean you don't just take somebody's life and think that it's ok. So yes, I definitely deserve punishment. How much, I don't know. . . . My judge had told me I lacked moral scruples and I understand that. I had no clue what morals were and I had no clue what scruples meant. So I had to find that in a dictionary and put the two together, you know, so integrity or honesty and all these things I needed to learn I went ahead and started to build this (Youtube, 2009).

The previous excerpt documented a now 29-year-old female charged and sentenced to life in prison at the age of 16 for killing her pimp who raped and began prostituting her at age 13 (Youtube, 2009).

National statistics on juvenile crime and research designed to understand the causes of and factors influencing juvenile delinquency and effective treatment for juvenile offenders illuminate the importance of evaluating current treatment approaches for the juvenile offender population. Findings from the most recent FBI crime statistics report, *Crime in the United States* (United States Department of Justice, 2007), highlighted the current state of juvenile (defined as persons under 18 years of age) crime in 2007. For example:

- The total number of juveniles arrested for all offenses equaled 1,459,649 in 2006 and 1,435,817 in 2007.
- Juveniles comprised 26.0% (319,225) of persons arrested for property crimes in 2007.
- Juveniles comprised 16.3% (73,427) of persons arrested for violent crimes in 2007.
- The number of juveniles arrested for property crimes increased by 3.9% (270,537 to 280,986) from 2006 to 2007.

- The number of juveniles arrested for violent crimes decreased 2.8% (63,097 to 61,343) from 2006 to 2007.
- In 2007, juveniles were most often arrested for larceny-theft offenses (86,689) and other (simple) assaults (76,049), which were the two most common arrests for 2006 as well.
- Juveniles arrested for murder rose 2.8% from 2006 to 2007.
- The 2-year trend showed the number of juveniles arrested in 2007 decreased by 1.6% percent from the number arrested the previous year.

These statistics grouped all juvenile offenders together, with no specific attention to racial/ethnic background or gender. However, other statistics from the same report categorized arrests by gender (see Table 1) and by the type of crime – violent or property crime – for the year 2007.

Table 1  
*Number of Arrests by Gender and Type of Crime*

Type of crime	Male juveniles	Female juveniles
Violent crime	*52,000 arrests in 2006 *50,589 arrests in 2007 *Decrease of 2.7% from 2006 to 2007 *Murder and nonnegligent manslaughter increase of 0.3% (735 in 2006 to 737 in 2007)	*11,097 arrests in 2006 *10,754 arrests in 2007 *Decrease of 3.1% from 2006 to 2007 *Murder and nonnegligent manslaughter increase of 51.3% (39 in 2006 to 59 in 2007)
Property crime	*182,244 arrests in 2006 *182,397 arrests in 2007 *Increase of 0.1% from 2006 to 2007	*88,293 arrests in 2006 *98,589 arrests in 2007 *Increase of 11.7% from 2006 to 2007

The increase in murder and nonnegligent manslaughter as well as property crime arrests for females draws attention to the changing landscape of juvenile offenders. The often

overlooked population of female juvenile offenders within past research creates an incomplete picture of the unique underlying factors of juvenile offense behavior and appropriate intervention. The lack of attention to female juvenile offenders within the research literature results in many implications that extend to understanding the unique qualities of female juvenile offenders, underlying factors and influences of offending, as well as intervention tailored to female juvenile offenders. Although similarities exist between male and female juvenile offenders, an assumption that effective interventions work across the spectrum of juvenile offenders stunts the evolution of intervention to take into account unique differences in juvenile offenders due to concepts such as gender.

Similar to the categorization of juvenile crime statistics by gender and type of crime, categorization by race/ethnicity and type of crime presented within the same report highlighted race/ethnicity differences (see Table 2). Race/ethnicity differences consisted of distinctions between White and Black juveniles for both violent and property crimes. The substantial percentage of Black juveniles who accounted for approximately half of the violent crimes committed by juvenile offenders, raised concern for the higher proportion of certain races/ethnicities committing particular crimes.

Table 2  
*Number of Arrests by Race/Ethnicity and Type of Crime*

Type of crime	White	Black	American Indian or Alaskan Native	Asian or Pacific Islander
Violent crime	34,810 arrests (47.5%)	37,151 arrests (50.7%)	631 arrests (0.9%)	649 arrests (0.9%)
Property crime	208,693 arrests (65.7%)	100,962 arrests (31.8%)	3,959 arrests (1.2%)	4,232 arrests (1.3%)

Although a 1.6% decrease in total number of juveniles arrested from 2006 to 2007 presented a somewhat hopeful sign, concern remains for how to address juvenile crime and

the issue of recidivism. Furthermore, according to the Office of Juvenile Justice and Delinquency Prevention, minority juveniles accounted for a larger proportion of certain crimes. For example, 50.7% of juveniles arrested for violent crimes were reported as Black juveniles compared to 47.5% reported as White juveniles (Puzzanchera, 2009). The high proportion of juvenile offenders from particular racial/ethnic backgrounds as shown in Table 2 supports the same concern stated in previous research designed to explore the relationship between juvenile offender recidivism and ethnicity (Baffour, 2006; Barrett, Katsiyannis, & Zhang, 2006; Gavazzi, 2006; Schwalbe, Fraser, Day, & Cooley, 2006).

The Federal Bureau of Investigation's preliminary crime report for 2008, released in June 2009, did not include results specific to juveniles at the time of this dissertation, therefore preventing the inclusion of current information about juvenile arrests for 2008. While national 2007 arrest data existed for juvenile offenders, due to the diverse definitions of recidivism, and therefore difficulty comparing recidivism rates, no national juvenile recidivism statistic exists (Snyder & Sickmund, 2006).

The Virginia Department of Juvenile Justice (VDJJ) gathered recidivism statistics, although not all states provided information to VDJJ. Of the 27 states who provided information on recidivism for juvenile offenders, the rearrest rate for Florida, New York, and Virginia was 55%. The referral to court rate for Colorado and Maryland was 45%. In regard to readjudication, Arkansas, Florida, Georgia, Kentucky, Maryland, North Dakota, Oklahoma, and Virginia reported a 33% rate. The reincarceration or recurrent detention rates ranged from 12% in the juvenile system (Arkansas, Missouri, New Mexico), 25% for any offense in the adult and juvenile systems (Arizona, Ohio, Texas), and 24% for criminal

offenses in both the adult and juvenile systems (Florida, Maryland, Virginia) (Snyder & Sickmund, 2006).

As the number of arrests and rates of recidivism continue to change over time, the continual evaluation and adaptation of treatment for juvenile offenders remains an integral role of professionals working with this juvenile population. Despite the recent decrease in juvenile arrests, changes in arrests with apparent gender and race/ethnicity differences warrant expansion and replication of research to determine effectiveness of treatment with diverse juvenile populations.

The purpose of the current study is to evaluate the effectiveness of one treatment approach, Moral Reconciliation Therapy® (MRT), in reducing recidivism among juvenile offenders. In the evaluation of MRT, the current study includes specific attention to how the number of MRT steps completed is related to recidivism, and the possible moderating effects of gender and race in the relationship between the number of MRT steps completed and recidivism.

In addition to evaluating the effectiveness of MRT, the Juvenile Crime Prevention Risk Assessment (JCP Risk Assessment) will be tested to determine the validity of the assessment to predict recidivism. Incorporation of gender and race are also included to determine possible moderating effects in the relationship between the JCP Risk Assessment and recidivism.

## LITERATURE REVIEW

This literature review begins with research focusing on gender and race/ethnicity issues related to juvenile offenders as a supplement to understanding the FBI crime statistics noted earlier. In addition, a summary of research on interventions (other than the MRT intervention) for juvenile offenders helps to paint the picture of the current literature on juvenile offender intervention. A description of the MRT program, including research on moral development and an in-depth review of literature evaluating MRT in the areas of both adult and juvenile offenders, due to the limited research on MRT with juvenile offenders concludes the literature review.

### **Gender and Race/Ethnicity Issues Related to Juvenile Offenders**

In the current literature, researchers consistently acknowledge the lack of attention to females and diverse ethnicities, especially with regard to intervention (Baffour, 2006; Barrett et al., 2006; Gavazzi, 2006). These same limitations, lack of testing with juvenile females and with racially/ethnically diverse populations, represent limitations of evaluative MRT research, as well. Along with the concern about lack of representation of females within evaluation research and greater proportions of certain ethnicities and races committing delinquent behavior, ethnic differences related to type and severity of crime and the change in offenses committed by females represent areas that necessitate examination (Kenny & Lennings, 2007; Wolf, Graziano, & Hartney, 2009).

**Gender, race/ethnicity, and risk assessment of juvenile offenders.** Assessment of the risk of recidivism marks a crucial part of the attempt to reduce recidivism. The ability of a recidivism assessment to predict the juveniles with a greater likelihood to reoffend as well

as predict the juveniles with lower risk offers a valuable resource to professionals attempting to appropriately match intervention with risk of recidivism.

Gavazzi (2006), Gavazzi, Bostic, Lim, and Yarcheck (2008), and Gavazzi, Yarcheck, Sullivan, Jones, and Khurana (2008) studied gender race/ethnicity, and family factors through the utilization of the Global Risk Assessment Device (GRAD). Gavazzi stated a concern about the lack of quality of recidivism risk assessments completed within the juvenile justice system. The evaluation of 1,069 court involved juveniles, 37% female, 63% male, approximately evenly divided between African American and White adolescents led to findings of African American females associated with the highest levels of the parent/family domain, meaning this group reported the lowest level of healthy family functioning. Overall, females reported the highest risk in the parent/family domain compared to males. Gavazzi, Yarcheck, et al. found significant results between the variable of recidivism and the risk scores in the education, accountability, and family domains, measured by the GRAD. In the above two studies, the completion of the GRAD, specifically designed for court involved adolescents and families, gained comprehensive information about the domains of gender, race/ethnicity, family, substance abuse, education, peers, mental health, as well as several other important systems within a juvenile's life.

Gavazzi, Bostic, et al. (2008) implemented the GRAD with a focus on understanding, gender, race/ethnicity, and family as influencing factors on both internalizing (e.g., depression) and externalizing (e.g., aggression) behaviors among juveniles involved in the court system. Through a sample similar to the Gavazzi (2006) study, the researchers found that African American females scored significantly higher on the family/parenting domain compared with White females. Also, the researchers found significantly elevated

externalizing behavior scores for the African American females compared with the African American males, a moderating effect between gender and race/ethnicity. Overall, females reported significantly more internalizing behaviors when compared with the male juveniles. Through the use of structural equation modeling, the researchers found that for all African American juveniles, the family/parent domain acted as a mediator between gender and both internalizing and externalizing behaviors. Therefore, African American females scored high on both externalizing and internalizing behaviors, although all females scored high on internalizing behaviors. The presence of high scores on the family/parent domain suggested that an unhealthy home environment with high conflict and tension significantly affected mental health, especially for African American females.

The gender and race/ethnicity differences found by Gavazzi (2006), Gavazzi, Bostic, et al. (2008), and Gavazzi, Yarcheck, et al. (2008) may be due in part to what Schwalbe, Fraser, Day, and Cooley (2006) described as systematic bias in assessments due to the lack of validity for diverse populations. The authors specified three aspects of systematic bias. The first aspect, *omitted variable bias*, included leaving out variables that occurred more in certain populations, thus reducing the amount of assessed risk or variance explained. The second aspect, termed *dimensional identity*, meant the association between recidivism and certain populations varied due to the population rather than the true measurement of recidivism. Lastly, *sampling bias* due to monitoring certain populations at a higher rate possibly led to catching more juveniles within this population partaking in illegal activities. In a study of a specific assessment (North Carolina Assessment of Risk) of 9,534 African American and White youth, Schwalbe et al. found that African American males scored the highest levels of recidivism. The lack of prediction of recidivism for White females raised

concerns about the unique differences of this population. For instance, did the White females truly recidivate at a lower rate? What percentage of White females were formally charged compared with other juvenile populations? Following assessment and implementation of intervention, professionals within the juvenile justice field such as Baffour (2006) aimed to determine the effectiveness of interventions with specific respect to gender and race/ethnicity of the juvenile offenders.

**Gender, race/ethnicity, and intervention for juvenile offenders.** Baffour (2006) stated the importance of gender and race/ethnicity in relation to interventions with juvenile offenders. She also mentioned the continued high level of recidivism among juvenile offenders and the lack of attention to intervention with females who represent an increasing presence in the juvenile justice system as well as the high ratio of certain ethnic groups, specifically African American and Latino/a youth. Baffour aimed to study the effects of a restorative justice program, Family Group Conferencing (FGC), with specific attention to the effects of gender and ethnicity on the relationship between FGC and juvenile offender recidivism. FGC consisted of a dialogue between the victim, offender, and other related individuals to openly process the repercussions of the crime with the assistance of a mediator.

The quasi-experimental study consisted primarily of first time male and female juvenile offenders, assessed for rearrest over a 1.5 year period. Of the 292 juveniles, 191 identified as male and 101 identified as female; 145 identified as Latino/a. Only 27.4% or 80 juveniles participated in FGC, with 37.4% or 109 juveniles who refused to participate in FGC for various reasons. The control group consisted of 103 juveniles. Gender accounted for the greatest variance in recidivism, with males more likely to recidivate than females. Also, FGC

recidivism rates were significantly less than recidivism rates for the juvenile offenders within the control group who were part of the standard adjudication process. The large number of juvenile offenders who refused to participate in FGC, particularly African American juveniles, may have enhanced the viewed effectiveness in FGC evidenced by lower recidivism due to the desire by these juveniles who participated in FGC to participate in FGC, where accountability for actions and desire to dialogue with the victim were precursors to participation.

Similar to Baffour (2006) with a focus on first time juvenile offenders, Barrett et al. (2006) explored incarceration, prosecution, level of severity of an offense, and recidivism among first time juvenile offenders. Assessment of 4,393 females and 8,074 males, 6,214 who reported as White juveniles, and 6,039 who reported as Black juveniles led to several significant findings. Males and Blacks received more referrals for non-status, felony, and violent felony offenses; however, a greater number of White females perpetrated status offenses, although significantly less likely to perpetrate felony or violent felonies. In regard to consequences determined by the juvenile justice system, adjudication (i.e., process of determining guilt of delinquent act) occurred at a higher level for Whites than Blacks, with higher levels of adjudication for White females. However, for the Black youth, adjudication occurred at higher levels for Black males compared to Black females. In addition, a greater likelihood of adjudication for misdemeanors and overall prosecution occurred for White females in comparison to Black offenders. Overall, males reported a higher likelihood to participate in diversion programs, an alternative to formal involvement with the legal system or involvement in court. The decision for a juvenile to participate in diversion programming occurred prior to adjudication (Educate Tomorrow, 2007). Therefore, these findings

suggested gender differences in the types of offenses committed. Ethnicity or race differences emerged, showing more adjudication or formal consequences for White youth, as well as a gender and race/ethnicity interaction due to the finding of higher levels of adjudication for White females despite the finding that females committed less serious crimes.

Wolf et al. (2009) called attention to the somewhat recent change in type of offenses committed by female juvenile offenders from engagement in primarily status offenses to offenses identified as severe. Behaviors committed by juveniles not considered as illegal behaviors within the adult system, such as running away, defined status offenses (Educate Tomorrow, 2007). Wolf et al. evaluated a specific program, the Reaffirming Young Sisters Excellence Program (RYSE), that focused on developing a closer relationship between the female offender and probation officer as well as with the community, using a primarily African American sample (15% Hispanic, 14% White, 6% Asian or Pacific Islander). The authors found few significant results; however they did find that the RYSE African American participants completed more traditional services than the African American comparison group participants. Also, differences resulted between the African American and White juveniles; in particular, African Americans completed fewer traditional services across both the RYSE and comparison group compared to the White juveniles. Although the RYSE program was designed to address cultural and gender-based issues, it appeared that more adaptations needed to be made to the program in order to increase future effectiveness due to the lower completion rate of African Americans compared to White females.

Ethnic and race-related concerns existed not only in completion of services in the Wolf et al. (2009) study, but also in the over-representation of certain ethnic and racial

groups in the juvenile justice system, a topic that shaped the purpose of Piquero and Brame's (2009) study. The two possible reasons for the greater representation of these ethnic and racial groups in the juvenile justice system included first, that certain ethnic groups committed more criminal offenses and second that discrimination existed, therefore influencing a larger number of certain ethnic youth involved in the juvenile justice system. Through exploration of the relationship between race and criminal offenses of 1,290 juvenile serious offenders, the researchers found no statistically significant differences between the racial/ethnic groups of Black, Hispanic, or White when comparing the self-report data of criminal offenses to the formal offense records. Although the findings did not parallel other research findings within this area, the focus on serious juvenile offenders represented a unique population, perhaps with less variability among racial/ethnic representation.

The Juvenile Justice and Delinquency Prevention (JJDP) Act of 1974 resulted in primarily gender differences within the juvenile justice field, such as Barrett et al.'s (2006) finding of higher adjudication for White females. The JJDP Act was designed to reduce institutionalization of juvenile offenders who committed status offenses as opposed to more severe offenses. Due to the higher rate of females committing status offenses compared to males, the Act significantly influenced consequences assigned to female juvenile offenders. Historically, within the juvenile justice system, legal charges related to females' sexuality and sexual behavior were common, but the same was not true for males. Furthermore, less severe offenses more often committed by female juveniles led to quite severe consequences (MacDonald & Chesney-Lind, 2001). In addition, gender-based programming marked another significant portion of the JJDP. Recent movement within the juvenile justice system to dampen or eliminate the goals of the JJDP Act created concern regarding appropriate and

beneficial consequences and outcomes for juvenile offenders involved with the juvenile justice system (MacDonald & Chesney-Lind, 2001; Wolf et al., 2009).

Cauffman, Piquero, Broidy, Espelage, and Mazerolle (2004) studied the relationship between gender, social-emotional issues, and delinquent behavior through self-report assessment. The sample included serious juvenile offenders, approximately evenly split between male and females and grouped into White and non-White due to the small sample size. A distress subscale measured social emotional issues, such as anxiety and depression. Other social emotional variables of interest within the study were impulse control, self-esteem, intelligence, and frequency of delinquent behavior. Results which supported gender differences included the higher levels of anxiety, depression, and lower levels of self-esteem for the female offenders. Although gender differences existed, the negative relationship between self-restraint and delinquency existed for both males and females.

Similar to Cauffman et al., MacDonald and Chesney-Lind (2001) wanted to understand gender differences within the juvenile offender population, with specific attention to the juveniles' experiences in the justice system. MacDonald and Chesney-Lind investigated the process from *petition* to *adjudication* to *disposition*, the proceedings or steps within the juvenile justice system once a juvenile allegedly committed an offense.

According to the Educate Tomorrow organization, *A Petition for Delinquency* is a written document including the alleged delinquent act and supporting information. The next step in proceedings, if the petition is accepted is adjudication. Adjudication includes involvement by a judge to determine guilt of a delinquent act. The term "delinquent act" parallels the finding of guilt of a crime in the adult system; a juvenile commits a delinquent act rather than a crime. If the juvenile is adjudicated, he or she is guilty of the delinquent act

(Educate Tomorrow, 2007). Disposition involves determining the outcome for a juvenile previously found guilty of a delinquent act during adjudication (Jurist, 2004).

Through a longitudinal analysis of 85,692 cases over 12 years – 30% females – MacDonald and Chesney-Lind (2001) found a higher rate of referrals for running away for female offenders compared to male offenders who committed a higher rate of property or violent offenses. Within the petition stage, no significant gender differences surfaced; however, at the stage of adjudication, the severity of the alleged crime acted as a more significant predictor for formal adjudication for females, but the severity of crime acted as a more significant predictor of formal disposition for males. Particularly interesting was the finding that in the adjudication stage, if females were found delinquent then the chances of a more severe consequence increased compared to males. Therefore, it was not a simple question about gender differences and the overall legal outcome, but about the stages within the process of decision-making. At each stage of the process, different findings emerged, suggesting that once a female reached formal adjudication, increased concern about a severe consequence within the disposition step was justified more so for females than for males.

The empirical research found by those such as MacDonald and Chesney-Lind (2001) supported the need for *gender-responsive* intervention described by Hubbard and Matthews (2007). Hubbard and Matthews presented a description of two approaches to viewing intervention with female juvenile offenders. The first, a feminist-based approach termed gender-responsive by the authors, brought to light macro societal and cultural issues that influenced and shaped the underlying issues of female juvenile offending. The second approach, often referred to in the literature as the *what works* type of intervention, took a more micro, individual-based approach, with cognitive behavioral therapy as a primary focus

of evaluative literature. Despite the differing philosophies underlying these two approaches, they converged on the concern of creating damage through consequencing female offenders with punishment more severe than the offense. Considering the common agreement between the two approaches regarding a consequence to appropriately fit the offense, a complementary relationship between cognitive-behavioral therapy and aspects associated with gender-responsive approach, such as a focus on strengths and relationships, seemed possible and beneficial to female offender clients.

The consensus among several researchers about the lack of attention to females and diverse populations within juvenile justice literature encouraged various current researchers to extend topics of juveniles offenders to include mental health, family interactions, intervention, and recidivism. A review of the current empirical research showed gender differences such as higher recidivism rates for male juvenile offenders, gender and race/ethnicity differences in types of offenses committed, and gender differences in severity of consequences (Baffour, 2006; Barrett et al., 2006; Cauffman, et al., 2001; Gavazzi, 2006; Gavazzi, Bostic et al., 2008; Gavazzi, Yarcheck et al., 2008; MacDonald & Chesney-Lind, 2001).

The need for sensitivity to the complex issues influencing juvenile offending behavior including gender and race/ethnicity extends to assessment and issues surrounding bias that attenuate the accuracy of predicting recidivism among a diverse juvenile offender population. Sondheimer (2001) suggested the importance of including relationships in intervention as well as addressing the significant amount of physical and sexual abuse often experienced by female juvenile offenders. The effectiveness of intervention with diverse populations deserves continued attention in the research to gain understanding of what works among not

only one segment of the juvenile offender population, but intervention that takes into account the unique cultural and gender influences of juvenile offending.

### **Intervention Approaches (Excluding MRT) with Juvenile Offenders**

Intervention approaches commonly implemented among the juvenile offender population consist of cognitive-behavioral approaches and Ecological Theory-based approaches, such as Functional Family Therapy, Multisystemic Therapy, and wraparound services, all of which aim to reduce recidivism. A description of and research surrounding the effectiveness of the MRT program will follow a summary of research evaluating the effectiveness of the above mentioned interventions.

**Cognitive-behavioral approaches.** Ecological-based intervention research dominates current peer-reviewed juvenile offender intervention literature; however, Trupin, Stewart, Beach, and Boesky (2002) designed a study to determine the effectiveness of Dialectical Behavior Therapy (DBT), a cognitive-behavioral approach to therapy. In this study, DBT, implemented within a residential setting for female juvenile offenders to address the co-occurrence of mental health and substance abuse disorders, led to a significant reduction in behavior problems among the mental health unit that received DBT. However, in comparison to the general population of female offenders, the mental health unit housed females with more behavior problems to begin with, including mood disorder and suicidal ideations, thereby allowing for more opportunity for reduced behavior problems. In addition to the significant finding by Trupin et al., Landenberger and Lipsey (2005) conducted a meta-analysis specific to cognitive-behavioral therapy approaches and overall level of effectiveness in reducing recidivism. Within the meta-analysis a limited number of MRT studies combined to an effect size of .04, which fell below the minimal level of statistical

significance of .10. The effect sizes for the four other specific CBT programs ranged from .21 to .16. Based on the meta-analysis, the authors stated continued support for cognitive-behavioral approaches on reducing recidivism for both adult and juvenile offenders.

**Ecological Theory-based approaches.** Several researchers assert the importance of including the family within intervention for juvenile offenders (Hussey, Drinkard, Falletta, & Flannery, 2008; Quinn & Van Dyke, 2004; Perkins-Dock, 2001; Sondheimer, 2001). Services including the family increase ecological validity through including contextual factors shaping juvenile criminal behavior.

In a review of family related interventions for juvenile offenders incarcerated within the justice system, Perkins-Dock (2001) emphasized the great amount of research that supports prevention and intervention services which incorporate a systems framework. Perkins went as far as to say the involvement of the family should be required to appropriately address the goal of reducing recidivism among juvenile offenders. Farrington and Welsh (2005) specifically reviewed randomized experiments within the field of criminal offense and identified that Multisystemic Therapy (MST) as an intervention associated with positive significant effects (.20 weighted mean effect size, statistically significant over .10). The significant effect size of -.13 for programs such as Scared Straight and boot camps suggested opposite results (an increase in recidivism) that were opposite to the goals of the program (a decrease in recidivism).

A substantial amount of current peer-reviewed research evaluated the effectiveness of Ecological-based interventions, such as wraparound services and Functional Family Therapy (FFT), with particular attention to evaluating Multisystemic Therapy (MST) (Faw Stambaugh et al., 2007; Huey, Henggeler, Brondino, & Pickrel, 2000; Pullmann et al., 2006;

Randall & Cunningham, 2003; Schaeffer & Borduin, 2005; Smith, 2006; Timmons-Mitchell, Bender, Kishna, & Mitchell, 2006). Pullmann et al. addressed the high degree of mental health problems among juvenile offenders through comparison of juvenile offenders within a specific wraparound program to those who received other mental health services. Participants in the comparison group who received the other mental health services were 2.8 times more likely to reoffend, with males 1.5 times greater than females. Also, when separated by type of offense, participants within the comparison group were three times more likely to recommit a felony offense, with males 2.2 times more likely to recidivate for a felony crime.

Faw Stambaugh et al. (2007) studied the outcomes for wraparound services and Multisystemic Therapy (MST) with an emphasis on inclusion of the family in juvenile treatment. Overall, between the three groups of (a) wraparound only services, (b) MST only, and (c) wraparound and MST therapy, all juvenile participants showed significant clinical improvements assessed by the *Child Behavior Checklist (CBCL)* and the *Child and Adolescent Functional Assessment Scale*. However, those who received only MST improved to a higher degree than those who received only wraparound services at the time of the 18 months follow-up. Furthermore, at the 18 months follow-up, those in the wraparound-only group and the MST plus wraparound group continued borderline clinical level for behaviors. Results from the CBCL showed more support for the MST-only group with regard to speed and level of improvement. Offering additional support for MST through the study of serious offenders comparing the effectiveness of MST and individual therapy over a time span of 13.7 years, Schaeffer and Borduin (2005) found MST participants significantly lower for recidivism or rearrest. Specifically, those who received individual therapy had 4.25 times

increased risk of recidivism, 2.57 times increased risk for a violent crime, and 2.63 times increased risk for a non-violent crime.

Huey et al. (2000) aimed to determine how MST effectiveness translated in a “real-world” environment. They found the family-based variables of *cohesion* and amount of supervision predicted a reduction in interaction with deviant peers, which was associated with reduced deviant behavior. Also, in regard to implementation, the relationship between *adherence* to the model assessed by parents/caregivers and therapists and deviant behavior was mediated by both *family functioning* (i.e., togetherness and supervision) and association with deviant peers.

Timmons-Mitchell et al. (2006) expanded the research on MST through a study similar to Huey et al. (2000), although independent from the creators of MST. They addressed the importance of implementing MST in the “real world” without direct involvement by the creators, which lacked at the time of this study. Recidivism, measured by rearrests at 18 months following randomly assigned participation in MST or the comparison group resulted in the finding of a significant reduction in recidivism rates for the MST group. In fact, the comparison group had 3.2 times greater likelihood of recidivating than the MST group.

Smith (2006) specifically evaluated MST and FFT effectiveness in the state of Oregon over four years. Four agencies implemented FFT, described as a family and strengths-based program with a focus on self-efficacy and the multiple systems of the juvenile offender. Two agencies implemented MST, described as a family and home-based program with a focus on empowerment of families, collaboration with the community, and the belief that multiple factors influence juvenile delinquent behaviors. With a focus on

issues such as correct implementation and recidivism (rate of referrals and offenses and severity of offenses) one year following the end of program involvement, the researchers found a pattern of concerns related to correct implementation. The implementation problems related to a lack of communication from the developers, inconsistent responses to questions asked by those providing MST or FFT services, and in general a reduction in availability of the FFT developers as time progressed. Despite these concerns, an overall label of “moderate” level of implementation for both the MST and FFT agencies given by the independent agency conducting the research meant that the existence of limitations did not surpass the positives. Therefore, the limitations did not appear to significantly harm adherence requirements for correct implementation. Regardless of the implementation concerns, the independent evaluators found a decreased level of referrals among the six agencies evaluated (see Table 3). The severity of offenses decreased for FFT agencies from 41-61% for referrals and 14-61% for offenses. For MST, the agencies neglected to gather information to evaluate severity of referrals and offenses. Along with a decrease in referrals, the evaluators discovered a decrease in frequency of offenses (see Table 4).

Table 3

*Decreased Referrals and Severity of Referrals for FFT and MST Over Four Years*

Type of offense	FFT	MST
Violent felonies	56-71%	49%
Felonies	47-69%	48%
Criminal offenses	45-71%	54%
All referrals	26-67%	53%

Table 4

*Decreased Frequency of Offenses Following Involvement in FFT or MST*

Type of offense	FFT	MST
Violent felonies	64-75%	38%
Felonies	22-78%	63%
Criminal offenses	34-67%	53%
All offenses	35-66%	54%

A significant amount of research supports the effectiveness of reducing recidivism for Ecological Theory-based interventions. With the addition of an independent evaluation by Timmons-Mitchell et al. (2006) and Smith (2006), perhaps credibility for MST and other conceptually similar programs in the natural environments of the juvenile offenders will continue to grow. From a perspective based on Bronfenbrenner's theory, the complex and bidirectional nature between the juvenile and connected systems and the proximal processes, such as between the juvenile and parent, necessitate intervention to include this complex level of interaction. The inclusion of bidirectional interactions amongst several systems leads to significant difficulty in studying as well as implementing intervention.

Long-standing support for the effectiveness of cognitive-behavioral therapy approaches exist in the literature with increasing evaluation of Bronfenbrenner's Ecological Theory-based interventions, such as MST, FFT, and wraparound services. Support for Ecological-based interventions show a reduction in behavior problems, deviant behavior, and recidivism, and an increase in healthy family interactions. Considering the important influence of the family, peers, and other systems within the juvenile's environment on juvenile deviant behavior, a comprehensive intervention, such as MST, FFT, or wraparound shows promise, although further replication to support long-term positive effects of the interventions require future attention.

Empirical and research-based intervention programs such as MST and FFT offered a solid foundation; however, without correct program implementation, validity of the program declined. Implementation concerns for both MST and FFT arose within the Smith (2006) study despite the fairly concrete guidelines for adherence. As described by Smith, examples of FFT guidelines included the following:

- Initial training
- Maximum caseload for each therapist
- Weekly telephone supervision with an off-site FFT consultant
- Three trainings within the year of initial training
- On-site supervisor with specific clinical FFT training
- Continual review of caseload information/files
- Observation over two years for official certification

The guidelines for MST according to Huey et al. (2000) and Smith (2006) included, but were not limited to:

- Initial training
- Maximum caseload for each therapist
- Weekly telephone supervision with a MST consultant
- On-site supervision by a MST trained supervisor
- Quarterly meetings for reviewing MST guidelines
- Review of case files
- Review of the program twice a year by the MST consultant

Besides the inconsistent communication with the developers, certain MST providers felt that the interventions suggested by the MST consultants contradicted the goals of the model as well as conflicted with general therapeutic standards. Schoenwald et al. (2000) and Lipsey (1999) referred to difficulty in correct implementation, although the MST developers created a measure in hopes of increasing adherence to the model. Lipsey presented a meta-analysis of empirical studies of rehabilitation of serious juvenile offenders. Although the results were promising, Lipsey concluded the meta-analysis by emphasizing the importance of replicated research within this area in order to address the various confounding variables associated with juvenile offenders and treatment outcomes. The author reported concern about not only the effectiveness of the intervention itself, but the process and implementation of the intervention; correct and consistent implementation is the key.

Therefore, concerns continue about the effectiveness of any program or approach when implemented by professionals other than the primary developers and professionals closely associated with the program. Moral Reconciliation Therapy, similar to MST and FFT is not immune to issues concerning implementation, in particular due to the vast amount of the research conducted by the developers and those closely associated to MRT on samples treated by associates of MRT.

### **Moral Reconciliation Therapy®**

Of particular interest in this study is the effectiveness of Moral Reconciliation Therapy (MRT) in reducing recidivism among juvenile offenders. Limited research exists on the effectiveness of MRT and juvenile offenders and the research that does exist includes primarily male juvenile participants, the majority of whom are participants within one

residential program where MRT is facilitated by the professionals closely tied to the development of MRT itself.

Moral Reconciliation Therapy is a cognitive-behavioral treatment method initially applied in a prison-based therapy community with a focus on drug treatment. According to Nichols and Schwartz (2001), a cognitive-behavioral therapy approach focuses on a change in thinking and cognitive patterns that then influence changes in behavior. With roots in behavioral therapy, emphasizing elements of behaviorism such as reinforcement and consequences, cognitive-behavioral therapy builds on behavioral therapy with the inclusion of internal cognitive processing and insight into one's thinking and behavior.

The development of MRT started in 1979, with the first formal programmatic use of the treatment in 1985 and the first publication of MRT in 1988 (Correctional Counseling Inc., 2007; Little, 2006; Little & Robinson, 1988; Moral Reconciliation Therapy, 2007; Robinson, 1994). Although originally developed for drug treatment and for criminal justice-based populations, the developers expanded the program to address topics such as driving under the influence offenses, domestic violence, sexual offenses, parenting, and education as well as expansion to the juvenile offender population. Juvenile offender boot camps, probation programs, drug courts, residential facilities, and education-based programs for at-risk students also have implemented MRT as a treatment approach (Little, 2004).

The phrase moral reconciliation stemmed from the term "conation," termed by Descartes as the meeting of body and mind (Little & Robinson, 1988). Conation as the cognitive-decision-making part of the therapy and Kohlberg's stages of moral development as a foundation of the moral decision-making part of the therapy combined as two primary foundations for the creation of MRT (Moral Reconciliation Therapy, 2007). In addition to the

goals of improving moral decision-making, increasing rates of completion in treatment, and increasing minority client participation in treatment, the developers of MRT aimed to address concerns of recidivism, defined often as rearrest or reincarceration for a new offense or technical violation (Little, 2006; Little & Robinson, 2006). A technical violation, defined within the legal community included a noncriminal violation, such as violating probation by missing an appointment with a probation officer (Connecticut General Assembly Office of Program Review and Investigations, 2001).

Little and Robinson (1988) outlined the primary concepts and underlying theory of MRT in their original publication. They developed this type of treatment for resistant clients as well as to address moral development, identity issues, low self-esteem, delay of gratification, and other obstacles that may interfere with overall functioning. The authors described MRT with a foundation in a “simplified personality theory” (Little & Robinson, p. 139). In essence, the treatment program included learning theory, Kohlberg- and Piaget-based concepts and stages of moral development, Erikson’s ego and identity concepts, Maslow’s hierarchy of needs, and concepts from Carl Jung. Limited or excluded explanations regarding the concrete link between MRT and the theoretically-based concepts existed in the literature; however, I summarized a brief synopsis of each concept or theory in the following section.

The personality theory that Little and Robinson (1988) referred to included the perspective that individual beliefs and patterns develop over time, possibly overtaking the *inner self* (p. 139), described as an individual’s potential. When the developing personality dominates the inner self, a conflicting relationship forms, which leads to the use of unhealthy defense mechanisms. This conflictual relationship and use of defense mechanisms creates a

lower level of moral development. Healthy functioning occurs when the personality compliments the inner self in order for acknowledgement and growth of one's positive potential (Little & Robinson).

### **Theoretically-based concepts of MRT.**

*Kohlberg, Loevinger, and Piaget perspectives on moral development.* Kohlberg (1981a, 1981b, 2008) outlined six stages of moral development, beginning with the first stage identified as the *punishment and obedience* stage. A desire to avoid punishment and obey authority and rules, especially physical consequences marked this stage. The second stage, termed *instrumental exchange*, included a focus on one's own interests and needs and the process of fair exchanges to meet one's own specific needs. The third stage, *interpersonal conformity*, focused on expectations and relationships with movement towards a desire to help and gain approval from others, meet expectations, and maintain trusting relationships. The common concept, the golden rule, entered the picture of moral development at this stage. A focus on *law and order and social conscience maintenance*, the fourth stage, shaped a person's behavior to maintain the social structure – to follow rules beyond individual relationships to a more macro societal level to maintain social stability. Stage five, *prior rights and social contract*, established that one participates in adaptable social contracts due to the belief that they were positive for everyone. The last stage, termed *universal ethical principles*, incorporated the concepts of justice, conscience, and a respect for all, a stage few individuals were believed to achieve (Berk, 1998; Kohlberg, 1981a, 1981b, 2008).

The six stages outlined above were further categorized to the preconventional level (stages one and two), principled moral reasoning (stages three and four), and moral principles (stages five and six). Stages three and four were identified as the stages closely associated to

adolescence (Goldhaber, 2000). In addition to a summary of the sequenced six stages of moral development, Kohlberg (2008) emphasized the interacting roles of social and cognitive elements in the progression towards higher levels of morality. Through ongoing research interviewing children and adolescents, Kohlberg found patterns that the first two stages decreased over time and stages three and four increased until the age of 13, from which point stages five and six increased until age 16. The progression of moral development did not evolve by simple addition but through substitution and internalization of moral ideals of the social and cultural world by an active, rather than passive, individual. This process led to distinctively different stages of moral development. Knowledge and understanding from previous stages did not simply disappear, but through adaptation and more advanced cognitive abilities, moral reasoning improved.

Kohlberg (1981b) discussed common and differing assumptions of moral development between him and Loevinger. One commonality referred to the concept of ego as a conscious part of a person with cognitive abilities to appraise and make decisions. Hierarchical sequenced stages of moral development, similar to Piaget's ideas, represented one part of the greater ego as defined by Kohlberg. In addition, similarity existed amongst the stage descriptions of both Kohlberg's and Loevinger's frameworks of moral development. Differences surfaced between Loevinger and Kohlberg due to Loevinger's greater psychodynamic emphasis and Kohlberg's primary cognitive focus. Lastly, Loevinger identified one ego within moral development and Kohlberg identified numerous parts of the ego with the importance of cognitive ability as necessary for moral development, but not alone sufficient for moral development.

Goldhaber (2000) presented Kohlberg's expansion of Piaget's inclusion of moral development, including Piaget's emphasis on observing peer interactions to determine moral behavior and rules established during the interactions. Certain disagreements arose during game playing that allowed for peers to negotiate, understand, and construct morality. Berk (1998) identified two primary stages within Piaget's theory of moral development. The first stage termed *heteronomous morality* (5-10 years of age) consisted of the focus on fixed rules established by authority figures that required adherence in order to avoid consequences. The second stage identified as the *autonomous morality* stage incorporated the ideas of intention, increased perspective taking, and adaptable changes to rules to increase overall equality and reciprocity.

According to Berk (1998) and Goldhaber (2000), Carol Gilligan presented criticism for Kohlberg's stages of moral development due to females' focus on care for others and males' focus on justice in the realm of moral development. Berk and Goldhaber also stated that Gilligan asserted that males were often viewed as achieving higher moral development due to the fact that the stages were developed using qualities more associated with males than with females. If the theory developers chose to focus on female qualities in the development of the stages, it might have resulted in bias in favor of females rather than males. Gilligan, Murphy, and Tappan (1990) discussed Kohlberg's perspective of moral development contrasted to Piaget's thoughts about moral development. In comparison between Kohlberg and Piaget, the first two levels of Kohlberg's moral development coincided with Piaget's concrete operational stage, stages three and four with formal operations, and five and six with the more developed level of the formal operational stage. Gilligan et al. discussed a conflict between Kohlberg's stages and those in late adolescence and adulthood, due to a finding they

reported as a decrease from stage five to a combination stage of four and five or a combination of stages three and four. They stated that this decrease occurred even after an adaptation made to the scoring system of Kohlberg's stages and thus defined moral reasoning at the late adolescent and adulthood periods of time as a dialectical process, which included the processing of real life experiences rather than only hypothetical stories aimed to gain moral processing responses from participants. Therefore, moral reasoning included not only the concept of *justice*, but the concept of *care*, identified by the authors through their work with adults and exploring real life experiences to gain information about moral reasoning. In Gilligan et al.'s explanation, the context mattered and it was a movement from Kohlberg's focus on *universal logic* of moral reasoning to an inclusion of relationships, care, and real life, moral processing beyond a hypothetical situation. The authors emphasized the continual development of morality through adulthood, which included an individual's choice, context, relationships, and emotions as they related to moral reasoning.

Due to Gilligan's concern regarding gender and Kohlberg's stages of moral development and Kohlberg's stages as a foundation for MRT, implications arise regarding the level of effectiveness of MRT with female juvenile offenders. In addition to gender concerns, the concept of universal logic may also imply a lack of attention to cultural context, creating race and ethnic differences in the development of moral reasoning.

***Moral development research.*** Amid the research related to moral development and adolescence, common themes consisted of the significant roles of contextual factors for influencing moral development and the complex nature of moral development including both contextual factors such as peers and individual characteristics (Carlo, Fabes, Laible, & Kupanoff, 1999; Hart & Carlo, 2005; Paciello, Fida, Tramontano, Lupinetti, & Caprara,

2008; Spinrad, Eisenberg, & Bernt, 2007a, 2007b). Nunner-Winkler (2007) expanded empirical support for research of moral development with a population outside of the United States. The longitudinal assessment of German children at ages 4, 6, 8, 17, and 22 through the common measurement tool of hypothetical moral dilemmas led to multiple findings about *moral motivation*. The researchers coded data for moral motivation by measurement of the level of emotion the children/adolescents perceived the wrongdoers felt in the stories. Through comparison of the coded interviews to self-report data of actual criminal behaviors, Nunner-Winkler found that *moral motivation* at age four did not significantly predict *moral motivation* at age 22. However, as time went on, the ability to predict later moral motivation increased; the level of prediction increased from only 3% from age 4 to 22 to 34% between the ages of 17 and 22.

In addition to the importance of incorporating diverse populations and the complex factors associated with moral development, Carlo et al. (1999) encouraged the acknowledgement of the bidirectional relationship between children and contextual factors, such as parents. Hart, Atkins, and Ford (1999) and White and Matawie (2004) attempted to understand the relationship between primary contextual factors of parents and family and moral development. Hart et al. studied the concept of *moral identity*, operationalized and measured through an adolescent's choice to volunteer, along with family level variables. Mothers of the adolescents provided information about level of familial support and the amount of time the family spent in one another's company. The adolescent participants provided their perceptions regarding parenting-related variables, such as affection, arguments, input in the process of decision-making, and the adolescent's involvement in extra curricular activities. The mothers also reported on individual-based characteristics, such

as internal and external behavior problems of the adolescents. Gender, ethnicity, and cognition (i.e., reading abilities) predicted higher levels of volunteering; race and gender, specifically White youth and female youth, along with higher reading abilities predicted a greater degree of volunteering. Furthermore, the family variable of spending time together on a weekly basis also predicted volunteering even when controlling for significant variables such as gender and race/ethnicity.

White and Matawie (2004) also included the family variable of spending time together as a measure for *cohesion* in addition to the family's ability to adjust to change (i.e., level of flexibility) and how the family communicated. Studying 158 female adolescents and 60 male Australian adolescents and their families, the researchers examined the relationship between family variables and the adolescents' moral decision-making. The adolescents were asked to determine the level of influence that their family and school, labeled *external morality*, self-interest, labeled *internal morality*, and societal expectations, labeled *principled morality*, played on their own moral decision-making. Overall, the family variables of togetherness or cohesion, ability of the family to respond and adjust to change, and communication significantly predicted the level of external morality. The greater degree of family togetherness, flexibility of roles, structure and so on, as well as a greater degree of healthy family communication predicted the adolescent's report of the family as a significant influence on moral decision-making; the adolescents recognized their family as important in determining their moral thoughts and behavior. Also, the principled morality of the parents predicted the principled morality of the adolescents, another link between the family and adolescent moral decision-making. Of all the family variables, family togetherness appeared particularly significant.

Bronstein, Fox, Kamon, and Knolls (2007) investigated the relationships between *moral courage*, social interactions, family interactions, parenting, and self-esteem. The study began with 42 males and 51 females in 5<sup>th</sup> grade; at the completion of the study; 36 males and 42 females completed the study in 12<sup>th</sup> grade. Termed as “the willingness to speak up or take action in the interest of fairness and justice, for oneself as well as for others” (p. 661), moral courage, was measured 8 years after the start of the study at which time the participants were in the 12<sup>th</sup> grade. Observational data of the families with specific attention to parenting as well as children’s and parents’ self-reports of family interactions allowed for the measurement of family-based variables during the 5<sup>th</sup> grade year. The self-report data included responses to questions about family interactions, such as, but not limited to, family togetherness and unity, expressive and open communication, and willingness to include all family members in the decision-making process. To measure *social competence* teachers reported how well the target children interacted with peers during the 5<sup>th</sup> grade year. Self-esteem through self-reports by the children at both the 5<sup>th</sup> and 12<sup>th</sup> grade years accompanied other data. The coders assessed the observational data for interactions and grouped families as either *supportive guidance/aware parenting* or *punitive control*. The supportive guidance/aware parenting included behaviors of warmth and responsiveness to various needs of the child. Behaviors such as threatening and physical and verbal aggression defined punitive control.

Bronstein et al. (2007) found that higher levels of supportive guidance/aware parenting predicted moral courage for girls; however, punitive control predicted lower moral courage for the girls in the 12<sup>th</sup> grade. Due to the finding that social competence mediated the relationship between punishment and control-based parenting (viewed as poor parenting) and

later moral courage for girls, this finding highlighted both the importance of parent interactions on their children's moral behavior as well as important gender issues. Although social competence did not mediate moral courage for boys, it negatively predicted *moral reticence* for boys. The researchers also found that self-esteem mediated the relationship between supportive guidance/aware parenting and moral reticence for boys.

Paciello et al. (2008), using a longitudinal study of 177 males and 189 females at ages 12, 14, 16, and 18, assessed *moral disengagement*, physical and verbal aggression, violent behavior, and a desire or feeling to make amends for harmful actions towards others. The researchers collected data through self-report measures for the variables of moral disengagement, physical and verbal aggression (ages 14-16), violent behavior (ages 16-20), and desire to make amends (ages 14-20). In addition, at 12 years of age, school peers reported who they considered the top three individuals who demonstrated frequent physical and verbal aggression. Several significant findings included an overall reduction in moral disengagement over time, with the largest reduction from 14 to 16 years of age. In addition, reduced levels of moral disengagement were related to both lower levels of physical and verbal aggression and violence and more need to make amends. However, higher levels of aggression led to more moral disengagement later in adolescence. Also, children who were often reported by peers as physically and verbally aggressive were more likely to exhibit physical and verbal aggression and violence as they grew older.

Eisenberg, Cumberland, Guthrie, Murphy, and Shepard (2005) and Eisenberg, Zhou, and Koller (2001) explored variables associated with prosocial thought and behavior. Eisenberg, Cumberland, et al. focused on the change of prosocial behavior from middle adolescence to adulthood by measuring *helping behavior*, *perspective taking*, *sympathy*,

*personal distress*, and *prosocial moral reasoning*, through a longitudinal analysis of 16 female and 16 males at ages 15-16, 17-18, 19-20, 21-22, 23-24, 25-26. Overall, helping behavior rose from the 15-16 year age group to the 17-18 year age group, declined and plateau from the 22-33 to 23-24 age groups and then rose again at age 25-26. The variables of perspective taking and prosocial moral reasoning also rose over time and personal distress declined with age. Gender differences appeared to rise with the increase of age, with females associated with higher levels of prosocial moral reasoning and sympathy. Due to the continual changes of the prosocial variables associated with moral development beyond adolescence and into adulthood, programs aimed to increase prosocial behavior need to take into consideration the unique developmental needs of adolescents.

Through studying 61 male and 88 female Brazilian adolescents, Eisenberg, Zhou, et al. (2001) attempted to gain understanding about the relationships between the variables of perspective taking, sympathy, prosocial moral reasoning, and prosocial behavior. Through moral dilemma stories, commonly used within this field of research to assess for the variables of interest as well as a self-report measure of actual prosocial behavior and the *Bem-Sex Role Inventory* to assess for masculinity and femininity, the researchers found a positive relationship between prosocial moral reasoning, sympathy, perspective taking, and prosocial behavior. Femininity surfaced as a significant predictor of prosocial behavior more so than gender, which lost significance with the inclusion of femininity. Other gender differences included a significant relationship between perspective taking and prosocial moral reasoning for boys but not for girls. Eisenberg, Zhou, et al. found a significant relationship between femininity, perspective taking, and sympathy. Perspective taking and sympathy were significantly and directly related to prosocial moral reasoning, which

mediated all relationships with prosocial behavior, except only partially mediated the relationship between the variables of sympathy and prosocial behavior.

*Erikson and identity.* Erikson's Psychosocial Theory emphasizes the interaction between the person and the environment across the lifespan with the goal of resolving the specific conflict within each stage. The effects of how the individual resolves the challenge or conflict at each stage influences other stages across the lifespan. The concept of identity corresponds to the time of adolescence within the lifespan, although some studies support the idea that identity appears later in a bidirectional relationship with the concept of intimacy (Goldhaber, 2000). Also, within Erikson's theory attention is given to the understanding that the challenges are not exclusive to only one stage, but span across the nine stages over the lifespan; therefore, the concept of identity is not bound by the time of adolescence (Goldhaber). At the adolescence stage, the goal is to find a balance between the concepts of identity and identity diffusion with a successful balance leading to fidelity, or consistent commitment to values and other concepts associated with an individual's distinct identity. Erikson identifies the nine stages of the theory, including the stage associated with adolescence and identity as occurring in a predetermined sequence with variability due to each individual's social world. Specific to the challenge of resolving issues of identity is the concept of psychosocial moratorium, the importance of allowing adolescents ample time to explore identity, without lingering in the stage for too long and consequently leading to identity diffusion. Identity diffusion is described as a lack of a true sense of who one is – not knowing his or her distinct identity (Goldhaber). Due to the importance within Erikson's theory about interaction with the social world, peers play an increasingly important role in the development of identity for adolescents. Due to the possibility of juvenile offenders

interacting with peer groups who consist of other juvenile offenders, strong implications arise for an adolescent's identity. This also highlights the importance of context, including the family and what potential roles an adolescent perceives as possible.

Beyers and Cok (2008) referred to the importance of context for the development of identity within Erikson's theory, including contextual barriers, such as low socioeconomic status. Several researchers (Beyers & Cok, 2008; Beyers & Goossens, 2008; Bosma & Kunnen, 2001) acknowledged the lack of attention to context in the development of identity in past research. Therefore, Beyers and Cok included both parenting and gender as context variables in studying identity, neglected variables in past research. Beyers and Goossens studied the relationship between perceived parenting and identity development, with a focus on the interactional process of parenting and developing identity among older adolescents – 639 college students with average age of 19 years – in a longitudinal design consisting of one year between the two waves of data collection.

Beyers and Goossen (2008) found that higher maternal supportive parenting predicted only slight increases and even lower levels of range of exploration (e.g., exploring values and religion) and higher levels in range of exploration predicted better paternal supportive parenting as perceived by the adolescent. Perceived paternal supportive parenting predicted lower commitment making (e.g., commitment level to future career) while perceived maternal supportive parenting predicted higher commitment making.

Beyers and Goossen (2008) found several gender differences. Females perceived higher levels of supportive parenting and lower behavioral control by parents than did males and commitment-making was positively related to maternal supportive parenting for females only, while for males, commitment making was positively related to paternal supportive

parenting. Overall, the researchers emphasized a bidirectional relationship between the perceived parenting variables and the identity variables as shown by results such as exploratory range as both a predictor of higher paternal supportive parenting as well as predicted by maternal supportive parenting.

*Maslow's hierarchy of needs.* Jones (2004) described Maslow's hierarchy of needs as the process of meeting lower level needs before attempting to meet higher level needs. The needs, represented in a triangle, begin with the physical needs, which a person must meet before moving to the next level of needs; this pattern continues until reaching the top of the triangle. However, the movement does not follow a completely linear path and if a need surfaces at a lower level, the focus and energy will be rerouted to meet the lower level need. The lowest level of physical needs includes the needs for items such as food. Safety needs include both physical and emotional safety and social needs include the importance of relationships and interaction. A sense of feeling appreciated and worth by others marks the esteem needs, the fourth level.

With an emphasis on the importance of change to reduce recidivism, Jones (2004) identified the self-actualization level, the fifth level, as the level in which change occurred. Jones believed that Maslow's hierarchy of needs offered a useful framework within the corrections field with the goal of reaching the self-actualization level with help from corrections personnel in meeting the four lower levels of needs. Specifically, the self-actualization level offered offenders the opportunity to reach their potential of following social and legal guidelines and being overall productive citizens. Jones gave the example of maintaining regular safety checks of the individual offenders in a correctional facility to help create a feeling of safety (having one's safety needs met) as well as encouraging certain

social relationships with individuals considered positive (e.g., family members), as strategies for helping offenders meet their physical, safety, social, and esteem needs.

Rowan (1999) presented information beyond the levels of the Maslow hierarchy to include how different forms of motivation influence how people perceive and respond to situations within the hierarchy framework. The author discussed the difference between *abundance* and *deficiency* motivation in the process of moving through the hierarchy of needs; he described deficiency motivation as reactive, such as responding out of fear and abundance motivation as proactive, such as acting in an outgoing manner. The term deficiency motivation corresponded to the familiar understanding of Maslow's hierarchy of needs, specifically the focus of getting needs met. Rowan applied the term *homeostasis* from cybernetics as a descriptor of deficiency motivation. Within the five levels of the hierarchy, abundance motivation corresponded to self-actualization, esteem, and love/belongingness/social levels, although the author contended that both deficiency and abundance motivation presented themselves throughout all levels of the hierarchy. Overall, Rowan believed that each individual determined his/her perspective and focus on a situation or event in a deficient or abundant manner.

***Jungian concepts.*** Although specific identification of the Jungian concepts integrated within MRT in peer-reviewed publications on MRT were not explicitly explained, concepts associated with Jung include the conscious and subconscious egos, collective unconscious, archetypes, the self, synchronicity, and introversion and extraversion (Jung & Carrington, 1992).

The conscious ego refers to experiences, memories, and information an individual has awareness of; the subconscious ego is the memories that could surface to the forefront of our

conscious, but information for which we lack conscious awareness. The collective unconscious moves beyond an individual's personal experiences to shared experiences with others based on innately based archetypes. This shared personal experience does not represent just a shared experience or event with significant people in our life, but a collection of experiences from those we never physically encountered. Similarly, the concept of synchronicity refers the significant connection of events beyond just coincidence. The concept of self relates to a goal based on the Jungian framework to strive to balance opposites in our life, such as finding a balance between good and bad. The concepts of introversion and extraversion, two common concepts within discussion of personality and qualities of a person, may be viewed as individual descriptors. Introversion refers to an internal focus, such feelings and thoughts; extraversion refers to a greater focus on the external or social world (Jung & Carrington, 1992).

**Moral Reconciliation Therapy® implementation.** The program's implementation, through group and individual sessions, workbook exercises, and lecture aims to guide an individual through nine stages of MRT. The authors define 9 stages, 12 or 16 steps, and 7 components, defined below.

The nine stages, starting with the lowest level of moral development and lack of sense of identity, include the following: disloyalty, opposition, uncertainty, injury, nonexistence, danger, emergency, normal, and grace. Categorization of individuals to one or more stages depends on their level of moral development and identity. An individual may fall into more than one stage. The stage of *disloyalty* (stage 1) is identified by behaviors of lying, blaming, and negative emotions such as anger and resentment. Little and Robinson (1988) describe a person at this stage as having a self-perception of being a victim. A person within the

*opposition* stage (stage 2) may also lie and blame others, but in general is described as those who do not intentionally deceive people as much as those identified as disloyal. The *uncertainty* stage (stage 3) includes those who are somewhat aimless in life, with a lack of goals as well as a lack of trust for others. Furthermore, their beliefs tend to change fairly often. Individuals in the *injury* stage (stage 4) may begin to gain insight about how their actions affect themselves and others, but also possess a low self-esteem. The *nonexistence* stage (stage 5) consists of a lack of identity and feeling a lack of control over one's life. An individual within this stage may feel an overall lack of purpose in life. Although an individual in the *danger* stage (stage 6) may differ from previous stages due to his or her dedication to life goals, certain decisions to satisfy the purpose of gratification rather than societal expectations and rules continues to exist. However, an individual within this stage values relationships and overall views them in a positive light. The *emergency* stage (stage 7) includes a strong personal identity and the goals for this individual broaden beyond goals of self-interest. Individuals within this stage possess the ability to gain insight from poor decisions and use this insight in the future. The *normal* stage (stage 8) within MRT is marked by easily fulfilled goals and a great deal of thought for others, with a definite sense of purpose in life. A small number of individuals reach the *grace* level (stage 9). "They have great concern for social issues and are committed to doing the right things, for the right reasons, and in the right way" (Little & Robinson, p. 143).

Moral Reconciliation Therapy includes seven components and 12 or 16 steps. The components are behavior-based goals embedded within the 12 or 16 steps, depending on the individual needs of the client. For example, the component, *enhancement of self-concept* includes tasks associated with developing healthy relationships, addressed in steps 5, 6, 10,

and 11. The number of steps may depend on the seriousness of the client and/or the client's setting. The components and specified steps promote or lead an individual through the nine stages described previously. The components are self-evaluation, relational evaluation, positive behavior reinforcement, formation of identity, promotion of a positive self-concept, delay of gratification, and promotion of moral development. The components of MRT begin with an overall evaluation and confrontation of one's self, with a focus on beliefs, thoughts, patterns, behaviors, and defense mechanisms. The self-evaluation component includes a written analysis of one's self as well as discussions about the individual's evaluation within a group and/or individual setting, allowing for feedback from more developed clients. Following this initial component, the relational component consists of a written evaluation as well as conversations about an individual's personal relationships, which occur within group and individual settings. Within this component, individuals will create a plan to disassociate from unhealthy relationships and mend relationships deemed healthy for future functioning. The component of reinforcing positive behavior may include allowing and providing for opportunities to practice behavior that is not only healthy for the clients, but that focuses on positive behaviors towards others as well. This component also emphasizes the importance of personal responsibility. Gaining insight about his or her inner self characterizes the component of identity formation. Self-analysis and goal creation through group and individual exercises, such as "What is it you want to do?" and "Why do you think it will make you happy?" (Little & Robinson, 1988, p. 146), help individuals to reveal and understand their identities. Exercises and activities about relationships, community work, and helping other clients through their MRT process promote the component of developing a more positive self-concept and self-esteem. The component of delaying gratification is

completed through community service, a specific schedule of time to complete each step, and a focus on gratification within one's self. The final stage of moral reasoning development includes the use of moral dilemmas, community service, and continual open and honest evaluation of themselves throughout all stages of MRT in order to reach higher levels of moral development. Therefore, the entire process and stages of MRT work in collaboration for the goal of increased moral development (Little & Robinson).

Each of the 12 steps consists of a reading section about the topic, followed by tasks/homework assignments that require completion prior to the group session. The group session allows for presentation of each individual's homework based on the step he or she is at within the program. The steps are individually-based and not everyone in the group is on the same step at the same time. For example, the first step according to the Juvenile MRT workbook titled "How to escape your prison" is identified as "Admitting disloyalty: Giving up the lie" (Little & Robinson, 1997, p. 13). "STEP1. To begin the escape from the difficulties and problems in your life, and to take control of your life, you must admit that you are the source of the problems in your life. You must admit to some 'disloyalty' in your life" (Little & Robinson, p. 16). A summary of the meaning of disloyalty, including associated feelings, thinking patterns, and behaviors, opens the first step. Note that disloyalty is stage 1 presented previously. The associated task of step one is writing and presenting a *testimony*, which consists of discussing how the individual arrived to involvement in MRT, verbal acknowledgement of disloyalty, stating that he/she will be honest, and presenting about future positive adaptations to behavior. Within step one, completing the "Pyramid of the Present" (Little & Robinson, p. 18) through drawing pictures about behaviors the individual partook in ten years previously, five years previously, and one year previously, up

to present day allows for a review of the behaviors chosen in life. In parallel to the actual behaviors, the individual draws alternatives to the behavior he or she chose at ten years previously, five years previously, one year previously, and present day. After presentation of the homework, the individual who presented leaves the room to allow for the group and facilitator to discuss the presentation and decide to pass or not pass the presenter. Only peers who previously completed steps higher than the step presented by the individual may vote. If the group declines to accept the homework, due to less than 2/3 vote, the individual is allowed two more opportunities to complete the homework. Noncompletion of the homework leads to discussion with staff, which may lead to discharge from the MRT program (Little & Robinson).

To gain a better understanding of MRT, I observed an MRT group of juvenile males in action. Each juvenile presented homework based on his specific step through verbal presentation of the completed homework. During the discussions, when the presenter left the room for the decision process, the juveniles dialogued about the presenter's behavior over the last week as well as the homework to determine how much effort the presenter made towards completing the step. The group applauded as the presenter entered the room, which signaled completion of the step. The juveniles offered support, critical questions, and honest feedback to peers. In a somewhat confrontational moment when deciding to not pass a peer, the juveniles offered encouragement through verbalizing that the opportunity to present again meant that they believed in the presenter's ability to successfully complete the step. Although juvenile offenders may be viewed in a negative light, with emphasis on their bad behaviors equating them as bad people, the insightful and positive peer interactions allowed for a glimpse into their potential and the painful life experiences which shaped their unhealthy

behaviors. In addition, the ability for the juveniles to verbally and vulnerably discuss the ramifications of their behavior with those close to them showed their levels of remorse and guilt, important aspects to moral development.

**Moral Reconciliation Therapy® research and juvenile offenders.** To this date, the primary developers and colleagues closely involved in the implementation of MRT conducted the majority of research exploring the effectiveness of MRT and recidivism rates following that treatment. In addition, the MRT developers published their research on MRT in *The Cognitive-Behavioral Treatment Review*, the journal they created and own. The developers and colleagues closely associated with MRT very often cited successful outcomes in their research. Robinson (1994) described MRT as an effective cognitive behavioral approach to decrease recidivism in a field of treatment (offenders) with questionable or inconsistent evidence of effectiveness. Based on Kohlberg's conceptualization of moral reasoning, MRT drew on the belief that behaviors of substance abuse and offender related "sociopathic" behavior were related to lower levels of moral reasoning and therefore the MRT approach utilized specific steps and associated assignments to increase moral reasoning. Robinson stated a lack of effectiveness in reducing recidivism in substance abusing populations with other approaches such as support groups and educational and job skills training; however, in comparison, he reported the effectiveness of MRT through reduced percentages in recidivism in a DWI (driving while intoxicated) program for adult offenders. Considering the lack of consistently effectively rehabilitation intervention for offenders, Robinson declared MRT as an integral part in the process of reducing recidivism among criminal offenders.

Robinson (1994) reported supportive evidence for MRT with populations such as adult DWI offenders; however, a smaller amount of research exists evaluating the effectiveness of MRT with the juvenile offender population. Professionals associated with MRT development conducted the majority of the research specific to juvenile offenders and MRT, but it appeared to include only male offenders within one residential drug treatment therapeutic community in Tennessee, The Woodland Hills Youth Development Center (WHYDC), contracted with Correctional Counseling, Inc. to provide services. This therapeutic community, started in 1999, housed 12 juveniles for a minimum of six months and used MRT as the primary mode of treatment.

Burnette, Swan, Robinson, Woods-Robinson, and Little (2003) presented results of an initial evaluation of the MRT program in the WHYDC, within a *drug therapeutic community*. The community of male juveniles ( $n = 12$  present at any one time;  $n = 56$  participating in the program during that time), who resided in WHYDC and participated in MRT from September, 1999 to January, 2002 were the participants for the study. The Department of Children's Services referred the juvenile offenders to the WHYDC due to continued legal substance use problems. Of the 56 males who participated in the program, 23 completed the program and 10 left the program prior to completion. In addition, the researchers excluded 12 of the 56 juveniles due to their current participation in the program at the time of the study. The researchers also excluded 11 other juveniles who lacked a pretest and/or a posttest. For the 33 juveniles included in the final analysis, the researchers reported that 55% ( $n = 18$ ) were African American, 45% ( $n = 14$ ) were White, and 5% ( $n = 1$ ) were Hispanic or "other," with a mean age of 16.33 years. They participated in the program for an average of 151 days with 70% ( $n = 23$ ) completing the MRT program, defined as at least six months participation.

The researchers utilized a pretest posttest design with the pretest given within the first week of the juvenile's program involvement and the posttest completed approximately the day before discharge from the program. The time between the pretest and posttest ranged from 6-12 months. The measures used to assess various concepts of interest included (a) the Prison Locus of Control (PLOC) that assessed the levels of internal and external locus of control, (b) the Life Purpose Questionnaire (LPQ), which assessed for a sense of meaning in life, (c) the Short Sensation-Seeking Scale (SSS) that identified risk-taking behaviors, (d) the Multidimensional Scale of Perceived Social Support (PSS), which determined perceived support by family, friends, and significant others, (e) the Problem Oriented Screening Instrument for Teenagers (POSIT) that identified overall problem areas within an individual's life, and (f) the Defining Issues Test (DIT) used to evaluate moral reasoning according to Kohlberg's stages of moral development.

Using *t* tests, the researchers found a significant decrease in external locus of control for all juveniles over time/between pretest and posttest. Although the largest decrease in the external locus of control scores occurred for those who did not complete the program, the differences in posttest scores between the completers and non-completers were not significantly different. The researchers found no statistically significant difference regarding the LPQ scores including no differences between the groups at pretest, but at posttest, completers scored significantly higher than non-completers, which showed a higher degree of meaning or purpose in life. A Pearson correlation indicated a significant positive relationship between length of time in the program and LPQ scores at the beginning of the program; a higher life purpose score at the pretest was associated with a longer stay in the program. However, a longer length of stay in the program was not associated with higher scores on the

LPQ at the posttest, considered a nondesirable result. Sensation-Seeking Scale results indicated no significant changes in risk-taking behaviors over time and no differences between completers and non-completers (see Table 5).

Table 5

*Results for Juvenile Offenders for the Areas of Locus of Control, Life Purpose, Sensation Seeking, Perceived Social Support, Perceived Life Problems, and Moral Reasoning*

Measure	Burnette et al. (2003)
PLOQ (locus of control)	Significantly decreased (external locus of control)
LPQ (life purpose)	Significantly increased for completers at the time of posttest
SSS (sensation seeking)	No significant differences or changes
PSS (perceived social support)	Significantly increased for family and friends only
POSIT (perceived life problems)	Significantly decreased
DIT (scale two through 6 – lowest to highest moral reasoning)	No significant differences or changes

The PSS showed significant changes in perceived social support between the pretest and posttest but only for perceived family and friends support; however there were no significant differences between completers and non-completers. No significant changes in moral reasoning were found for the DIT.

Correlation analyses between length of stay in the program and the various measures were not significant for the SSS and PSS. The POSIT showed a significant decrease between the pretest and posttest scores for all participants of the study, meaning the juveniles experienced a decrease in perceived problems within their lives. However, the researchers

found no significant differences between the group of completers and the group of non-completers for the POSIT scores (Burnette et al., 2003).

Burnette, Swan, Robinson, Woods-Robinson, and Little (2004a) replicated their 2003 study during the six month period of February, 2002 to July, 2003 with the 29 juvenile participants within the WHYDC program. Similar to the previous study, repeated *t* tests showed a significant increase in the LPQ scores and a significant increase in perceived support from family and friends assessed by the PSS. The two remaining significant results from this study included a decrease in the POSIT scores and a decrease in SSS scores from the pretests to the posttests. In summary juveniles appeared to perceive more purpose or meaning within their lives (LPQ scores), a decrease in problems in their lives (POSIT scores), and a decrease in behaviors identified as risk-taking (SSS scores).

Burnette, Swan, Robinson, Woods-Robinson, and Little (2004b) continued the assessment from the time the Burnette et al. (2004a) study ended. Burnette et al. (2004b) evaluated the time from July 1, 2003 to June 10, 2004, with 23 juveniles released from the WHYDC and MRT program. Although all 23 participants were included in the analysis, 78.3% of the 23 actually participated. Interestingly, four juveniles did not participate in MRT due to issues regarding poor behavior. The authors presented the seventh step of MRT as a significant step in the program; 69.6% of the participants completed seven steps and 65.2% completed all 12 steps. The identical six measurements used in previous studies (PLOQ, LPQ, SSS, POSIT, PSS, DIT) led to results that included significant decreases in the lowest level of moral reasoning as assessed by the pretest and posttest DIT scores. Of particular interest, recidivism, measured by disposition within six months of discharge from the WHYDC, was reported as 13.3%.

Although the studies presented above reported positive results after participation in the MRT program, Armstrong (2002, 2003) found no significant results between juvenile offenders participating in an MRT program and those who did not participate in an MRT program. The sample initially included 256 males housed in a detention center and ranged from 15 to 22 years old. The participants were randomized into a treatment group ( $n = 106$ ) or a control group ( $n = 102$ ). The treatment group received MRT in a Youth Offender Unit (YOU) and the control group was housed in the general population of the detention center and did not receive MRT. However, 19 of the original 129 participants within the treatment group never received MRT due to refusal, lack of English speaking skills, or release from the detention center, resulting in 106 individuals within the treatment group. Also, 25 of the 127 participants within the control group had been previously exposed to MRT due to their inclusion in a unit identified as YOU prior to its formal designation as the YOU or due to concern for juvenile safety within the general population, resulting in 102 individuals for the control group. Armstrong found no differences when completing statistics for the initially formed groups compared to the groups after removing the 19 participants from the treatment group and the 25 participants from the control group. The researcher found no significant differences between the groups with regard to disciplinary actions throughout time in detention, race, age, or violent, property, drug, or other arrests, and the amount of time that passed before recidivism. Although there were more African Americans than Caucasian in the treatment (MRT) group, the differences in the number were not significant.

Overall, Armstrong (2003) found no significant differences between the treatment and control group; MRT did not appear to reduce rates of recidivism. This lack of significance remained when the researcher compared a group with a high level of MRT

implementation with the control group. Racial makeup also did not appear to influence the results of this study. Armstrong (2002) used the data from the 2003 study to examine how the environment, specifically the YOU which housed only juveniles, influenced the juvenile's behavior while incarcerated. Specifically, Armstrong found no differences between the group housed in the YOU who received MRT and the group housed in the general population who did not receive MRT. Information regarding services and treatment received by the control group were not reported. No differences were found regarding number of disciplinary violations during detention; however, significant differences were found between the length of time in the MRT program, and prevalence as well as frequency of overall disciplinary violations. Therefore, an increased amount or length of time in the MRT program was associated with lower prevalence and frequency of disciplinary violations.

An additional independent study by Kirchner and Tolan (2007) of the effectiveness of MRT, published in *CBTR*, found support for the effectiveness of MRT in reducing recidivism for juveniles participating in a drug court program. The independent evaluators collected recidivism data from March 2002 through March 2007; however, MRT was not established as a requirement of the juveniles until January 2005. The authors reported that 8.6% of the sample of 55 graduates of the drug court program who participated in MRT reoffended, compared to 31% of drug court juveniles in February 2005 who did not participate in MRT. However, the percentage of juveniles who participated in MRT and reoffended compared to those who did not participate in MRT were 21% and 46% respectively. Details regarding the demographics of the juveniles, how juveniles were chosen to participate in drug court or MRT prior to required participation were not included. Furthermore, the drug court program also implemented services to promote educational achievement and family involvement and

it may prove difficult if not impossible to determine the independent effects of MRT on recidivism rates.

Little (2004) presented a review of literature specific to MRT and the juvenile offender population. Although the author discussed the use of MRT within boot camps and drug courts, he acknowledged the lack of published studies related to the use of the MRT with these groups of juveniles. Little reported the positive results related to MRT cited previously (Burnette et al., 2003; Burnette et al., 2004a, 2005b), but also critiqued Armstrong's 2003 publication, described previously within this document. Little reported a concern about the age group of the participants (15-22 years) in Armstrong's study, as well as a concern for randomization, and lack of acknowledgement of the limitations of the study. Although all were valid concerns when critiquing the accuracy of a study, Armstrong did appear to acknowledge and present limitations of the study as well as attempt randomization, which did not exist in the Burnette et al. (2003, 2004a, 2004b) studies. Overall, although Little criticized the methods of Armstrong's study, perhaps the knowledge gained from the study could be used for future research and adaptations of MRT.

**Moral Reconciliation Therapy® and adult populations.** Due to limited evaluative MRT research with juvenile offenders, studies examining the effectiveness of MRT with adults provides for a greater understanding of MRT's overall effectiveness. Little and Robinson (1989b) and Little, Robinson, and Burnette (1989c, 1990, 1991b) presented findings of an adult population over a span of three years. The sample for the Little and Robinson (1989b) study included 115 male DWI offenders incarcerated within Shelby County Correction Center, a prison-based therapeutic community with MRT as the main treatment. The sample consisted of males housed within the *Alcohol Unit* who had at least 30

days left to complete on their incarceration time/sentence. Demographics of the population included an average age of 36.6 years with 49 % of the participants identified as Black for what was termed as the experimental group. The group identified as a control group ( $n = 65$ ) were DWI incarcerated males who also applied for the MRT program, but did not participate in the Alcohol Unit and the MRT program due to lack of space. The demographics for the control group included an average age of 35 years with 58% of the control group identified as Black. Other demographics regarding ethnic and race backgrounds were not reported. The researchers measured variables of interest through use of the Mac Andrew Alcoholism Scale, Sensation-seeking Scale (10-item form), Life Purpose Questionnaire, and Defining Issues Test. The previously identified assessments were completed on the start day of the (MRT) DWI program and again on the day prior to discharge. Any arrests after discharge were used as the definition and measurement of recidivism. A specific length of time that arrest records were assessed was not given, but the average length of time post discharge was 258.9 days. The researchers completed Pearson correlations to determine recidivism among the sample, excluding those with tests termed as “invalid” or “incomplete” as well as excluding those who left the program for reasons not disclosed. In regard to the Mac Andrew test, the relationship between the pretest score and recidivism was significant; however, the relationship between the posttest and recidivism was not significant. Therefore, higher levels of alcoholism at the pretest were associated with higher levels of recidivism at the pretest, but not at the conclusion of participation in MRT. The difference score (change between the pretest and posttest) for measuring alcoholism and recidivism was significant. All correlations for the Life-purpose Questionnaire as well as the Sensation Seeking Scale and recidivism were found to be not statistically significant. The authors stated a concern about

using the short form on the Sensation Seeking Scale as a possible reason for lack of significant results. With respect to scores on the pretest Defining Issues Test, scale six, identified as the highest level of moral reasoning, was significantly negatively related to recidivism and MacAndrew test scores. Also, the *principled reasoning* score identified as the summation of scale 5 and 6 was also negatively significantly related to recidivism. Therefore, the moral reasoning measured by the Defining Issues Test led to an interpretation of higher levels of moral reasoning associated with lower levels of recidivism and lower levels of alcoholism.

Little and Robinson (1989c) gave specific attention to drunk drivers and one-year recidivism rates. The participants completed steps 1-7 while incarcerated and 8-12 in an aftercare program, which consisted of weekly group sessions facilitated by CCI. Following discharge from the program, recidivism, defined as arrests and convictions were reported as 20% ( $n = 23$ ) for the experimental group and 27.6% ( $n = 19$ ) for the control group. For alcohol specific charges, 8.7% ( $n = 2$ ) of the experimental group recidivated compared to 10.8% ( $n = 6$ ) for the control group. In addition, 20% of the experimental group participated in the aftercare program, with 4.3% ( $n = 1$ ) who recidivated following initial discharge from the prison-based program. The aftercare program consisted of group sessions of MRT in an outpatient setting to continue through the steps of MRT. Although the title suggested a one-year time span for assessing recidivism, the authors noted on average that the results included within this article spanned less than six months following discharge. Therefore, the lack of a long-term assessment of recidivism limited the results of this study.

Little, Robinson, and Burnette (1990) reported the two year follow-up from the original 115 participants identified in the Little and Robinson (1989b) study. Table 6 consists

of the rearrest data for the MRT group and the control group. The researchers neglected to include statistical testing to determine differences of recidivism between the treatment, control, and aftercare groups.

Table 6

*Percentage of Participants Rearrested for DWI Offenses, Offenses Excluding DWIs, Reincarcerated for All Offenses, and No Arrests within Two Years Following Release (Little et al., 1990)*

Type of offense	MRT group	Control group	Aftercare group
DWI arrests	10.4%	15.4%	4.2%
All arrests (excluding DWI)	31.3%	36.9%	37.5%
Reincarceration	13.9%	21.5%	8.3%
No arrests	60.9%	53.8%	62.5%

Little, Robinson, and Burnette (1991b) found similar results to Little et al. (1990). Of the original 115 MRT participants, 24 participated in aftercare services ranging from three to 12 months following release from incarceration (see Table 7). The number of days since release averaged 896.9 days.

Table 7

*Percentage of Participants in the MRT Group, Control Group, and Aftercare Group Rearrested for DWI, All Offenses, and Reincarceration Three Years Following Release (Little et al., 1991b)*

Type of offense	MRT group	Control group	Aftercare group
DWI arrests	18.3%	16.9%	16.7%
All arrests (including DWI)	45.2%	61.5%	45.8%
Reincarceration	22.6%	36.9%	16.7%

Over the three years, participation in MRT did not appear to drastically reduce rearrests for DWI offenses, especially for the third year following release from incarceration. An association between the MRT group and lower arrests for all offenses in year three as

well as a consistently lower rate of reincarceration for the MRT and aftercare groups supported the effectiveness of MRT. However, due to the small sample sizes, especially of the control group ( $n = 65$ ) and the aftercare group ( $n = 24$ ), concerns arose regarding the meaningfulness of results. Furthermore, within all four studies, the researchers neglected to incorporate statistical analyses to determine if the differences between the three groups were in fact significant.

Similar to Little and Robinson (1989b, 1989c) and Little et al. (1990, 1991b), Little and Robinson (1989a) expanded to include those with drug offenses as well as those with DWI offenses. The sample consisted of inmates housed in *The Drug Abuse Program* ( $n = 62$ ) or *The Alcohol Treatment Unit* ( $n = 40$ ) of the Shelby County Correction Center. The same staff facilitated MRT for both units, also considered therapeutic communities. The Drug Abuse Program included 36 beds with treatment consisting of MRT and other services aimed at promoting positive behavioral change. The individuals within this program volunteered or requested to participate within the Drug Abuse unit. The Alcohol Treatment Unit maintained space for 40 individuals at one time.

The variables of interest for this study included moral reasoning based on Kohlberg's stages of moral development, assessed by the Defining Issues Test. Of special interest in research of the DIT was the principled reasoning score which was the addition of stage five and six of Kohlberg's moral development stages. "People who make their decisions from the levels of principled thinking tend to be guided by concerns of justice, equality, and basic human rights" (Little & Robinson, 1989a, p. 85). The authors utilized The Life-purpose Questionnaire as well as an assessment for recidivism. For The Drug Abuse Unit participants, assessment using the DIT showed a significant positive association between

principled reasoning and number of steps completed. A sample of 24 who completed both the pretest at intake and the posttest at step seven (not all 62 met this requirement) led to significant findings for an increase in the highest stage of moral reasoning and principled reasoning, a desirable result. For 30 of the participants who completed both the initial life purpose assessment and completed step seven of MRT, a positive association between life purpose and number of MRT steps completed was found as well as a significant difference between pretest and posttest scores for life purpose. Therefore, perceived life purpose increased as the number of MRT steps completed increased. Findings specific to participants housed in The Alcohol Treatment Unit included pretests at the start of the program and posttests around the time of discharge for all 40 individuals. Significant differences between pretest and posttest scores for life purpose were found, with an increase in perceived life purpose between the pretest and posttest. However, assessment of the DIT included only 25 participants, and showed desirable significant increases for principled reasoning, similar to the results for those in The Drug Abuse Unit.

In a separate study aimed to assess inmates with drug abuse issues, Little, Robinson, and Burnette (1991a) followed 70 males three years following release from the Shelby County Correction Center. The participants included male incarcerated felons with admitted drug problems who were both incarcerated and released spanning 1987 through 1988 who attended on average 31.4 individual and group MRT sessions. The control group consisted of 82 male incarcerated offenders who also were incarcerated and released during the same time period of 1987 through 1988 and received no MRT treatment. No differences were found between the treatment and control group by age, race, prior arrests, and sentence length of time (Robinson et al., 1991a, 1993). In addition to results provided in Table 8, a negative

relationship between number of steps of MRT completed and recidivism suggested a decline in rearrests associated with more completed steps of MRT.

Table 8

*Comparison of Recidivism Between MRT and Control Groups Three Years Following Release (Little et al., 1991a)*

Measure of recidivism	MRT treatment group	Control group
Mean number arrests per individual	1.6	1.8
Percentage of no arrests	39%	30%
Recidivism (rearrest and conviction)	24.3%	36.6%

Little, Robinson, and Burnette (1993) assessed recidivism at five years; a continuation of the Little et al. (1991a) study. The recidivism rate, measured by arrests, convictions, and reincarcerations was significantly lower for the treatment group (37.1%) when compared to the control group (54.9%). However, the average number of arrests per individual following release was not significantly different between the treatment group (2.6 arrests) and the control group (2.8 arrests) and a *t* test showed no significant differences between additional sentence days. Also, the percentage that experienced no arrests following release was 27% for the treatment group and 23% for the control group, but the significance level was not reported.

Research pertaining to females offered supporting results for the effectiveness of MRT (Burnette, Leonard, Robinson, Swan, & Little, 2004; Burnette, Prachniak, Leonard, Robinson, Swan, & Little, 2005). The research by Burnette et al. (2004) and Burnette et al. (2005) both studied women incarcerated and discharged from the Tennessee Prison for Women (TPW) with MRT conducted by CCI. The TPW housed 64 women at one time for a minimum of six months. Identical measures mentioned previously in this document assessed

for various personality characteristics and moral reasoning (PLOC, LPQ, SSS, PSS, and DIT). The Burnette et al. (2004) assessment extended from June 30, 2003 to July 1, 2004. The Burnette et al. (2005) study began on July 1, 2004 and ended on June 30, 2005. See Table 9 below for a summary of results from the Burnette et al. studies.

Table 9  
*Summarization of Pretest to Posttest Changes for Five Measures Utilized in Burnette et al. (2004, 2005)*

Measure	Burnette et al. (2004) 77.4% completed MRT n=84	Burnette et al. (2005) 74.5% completed MRT n=94
PLOQ	External locus of control significantly decreased	External locus of control significantly decreased
LPQ	Significantly increased	Significantly increased
SSS	No significant differences	No significant differences
PSS	Significantly increased for friends only	Significantly increased for family, friends, and significant others
DIT (scale two through 6 – lowest to highest moral reasoning)	Scale 6 significantly increased	Scale 3 significantly decreased and scale 4 significantly increased

In addition to the results presented in Table 9, correlations between the five measures and age, number of days in the program, number of steps completed, and race were also assessed. Burnette et al. (2004) found significant positive relationships between posttest life purpose and number of days in the program as well as number of steps completed. The number of steps completed was also significantly associated with posttest scores of increased internal locus of control, increased moral reasoning based on rule adherence, and decreased moral reasoning based on approval from others. Burnette et al. (2005) found similar results, the most notable being the significant associations between the number of MRT steps

completed and posttest scores of locus of control, support from friends, family, and significant others, and the DIT scale which measured an individual's acceptance of following rules. Therefore, with the completion of more steps, internal locus of control, social support, and acceptance of following rules and laws increased. The finding of association between number of MRT steps completed rather than only the time spent in the program and positive results such as demonstrated in Burnette et al. (2004, 2005) surfaced as a pattern throughout MRT research.

In addition to the results presented previously, Burnette et al. (2005) reported recidivism results based on 759 females who participated in MRT starting in 1998; 34.9% were rearrested with the participants averaging 33 months of time since release from incarceration prior to rearrest. This compared to a rearrest rate of 27.3% for 55 MRT participants in the Burnette et al. (2004) study who were released for an average of 26 months. Although Burnette et al. (2004, 2005) attempted to determine differences between those who completed MRT and those who did not, the studies lacked in including other important variables. Both studies reported discharging certain participants due to behavior problems, which led one to wonder about the population most suitable for this program. Significant behavior problems in a group setting implied more severe problems in general and due to the neglect to include information about prior offenses and severity of offenses among other variables, a clear picture and description of the participants remains unknown.

Studies of MRT not completed by the MRT developers, but published in the *CBTR* also noted positive results (Anderson, 2002; Kreuger, 1995; Kreuger 1997). Kreuger (1995) studied the rearrest data of 24 female and 197 male adult offenders within the Wayne County Jail from 1992 through 1995. The incarcerated adults were categorized as either out of jail for

three years ( $n = 82$ ), two years ( $n = 77$ ), or one year ( $n = 62$ ). The incarcerated adults volunteered to participate in MRT and also received other services in addition to MRT. See Table 10 for the presentation of rearrest rates. Furthermore, a group identified as attending at least ten sessions and completing three or four steps, rather than 1.6 or two by the standard group were assessed separately.

Table 10  
*Rearrest Rates for Three Continuous Years for the Standard Group and the Higher Completion Group (Kreuger, 1995)*

Years released	Rearrest at one year	Rearrest at two years	Rearrest at three years
Three years released (standard group)	6%	12%	29%
Three years released (higher completion group)			13%
Two years released (standard group)	6%	23%	
Two years released (higher completion group)		10%	
One year released (standard group)	13%		
One year released (higher completion group)	5%		

Although the rearrest rates appeared promising for support of MRT, no statistical results to determine if the rearrest rates were significantly lower as well as a lack of comparison group made it difficult to draw solid conclusions about the effectiveness of MRT in this study. At the five year follow up, Kreuger (1997) reported rearrest data for a total of 401 participants released for at least one year. The reported rearrest data for the 401 participants was 11% compared to 51% for the entire jail. Also, specifically for the year

1996, a comparison group of 25 was created for a comparison to the 159 participants in MRT, who reached their four year release mark in 1996. A chi-square test resulted in a significantly lower rearrest rate for the treatment group. No information was given regarding how the comparison group was formed.

Anderson (2002) studied MRT within the Illinois Department of Corrections Southside Day Reporting Center Re-Entry Program. Parolees identified as more at-risk were referred to the program, which involved intense supervision and contact with a case manager. Furthermore, services beyond MRT may have been included to address individual needs. Although the 1,503 participants involved in the re-entry program were not randomly assigned, 871 parolees involved in traditional parole services were matched on characteristics such as previous number of incarcerations for a comparison group. The reincarceration for the treatment group was found to be significantly lower at one year, two years, and three years following incarceration.

Literature reviews by Little (2000, 2005, 2006) outlined the overall results in support of MRT. Little (2005) conducted a meta-analysis on parolees and probation outcomes and overall found a significant effect size of .2257. Little (2006) focused his review on recidivism among incarcerated felons. Categorized by one, two, or three year recidivism rates comparing MRT treatment groups and control groups, the author reported a reduced rate of recidivism for the MRT group at each year, but statistical significance was not reported. Little (2000) reviewed MRT amongst the variety of settings of implementation. Overall, Little reported primarily positive results from reviewing 78 studies of MRT, which included the following:

- \* Increased moral reasoning
- \* Increased life purpose
- \* Fewer behavior problems during incarceration
- \* Decreased recidivism following incarceration including for DWI participants, but not a decreased rate of recidivism for future DWI offenses

Little (2000) criticized Armstrong's 2000 study for lack of random assignment and differences between the treatment group and comparison group, among other criticisms. However, Little's criticisms were identified as limitations of MRT studies by Allen, MacKenzie, and Hickman (2001). Through an evaluation of studies including those examining the effectiveness of MRT, Allen et al. concluded that the majority of the MRT research was conducted by the developers on the same sample over time. Additionally, a large portion of MRT studies lacked random assignment, control of other possible influential variables, or discussion of other possible reasons for the results of the studies. Earlier studies of MRT, such as those completed in the 1980s, lacked testing of statistical significance, although this has been incorporated in recent research. Despite the methodological limitations, researchers who studied MRT found significantly lower rearrest and reincarceration rates for participants who participated in MRT.

In addition to the studies presented above, a significant portion of the research evaluating MRT focused on MRT as part of a drug court program. Whether the researchers aimed to study MRT with the drug court population, DWI population, or juvenile population, employment of a pretest posttest design to measure the five personality measures described previously, retention, and recidivism emerged as themes in the methodology of the studies. Consistently, the developers and researchers of MRT reported positive findings in support of

MRT in retaining clients in treatment, reducing recidivism, as well as promoting positive personality changes, such as increased internal locus of control, increased sense of purpose in life, and increased moral reasoning.

Questions arose as to how interventions other than MRT either in combination with MRT or more independently promoted the positive results attributed solely to MRT. Furthermore, how did mere involvement in treatment affect variables of interest such as perceived social support? The fact that the incarcerated participants represented a somewhat extreme segment of the population involved in an intervention may have posed a threat to internal validity – regression toward the mean. Furthermore, a lack of control for possible confounding variables and other threats to validity not addressed in the MRT research, produced doubt about the acknowledgement of threats to validity in the design and analysis of the studies. For example, the term *control group* was used rather than *comparison group*, which implied that the researchers controlled for possible influential variables. However, due to the population of interest how much control truly existed within the MRT studies? In general, greater detail about methodology, participant characteristics, limitations, and choices made about how and why they studied certain variables would provide for a more complete view and understanding of the research and therefore reduce the number of unanswered questions that led to doubt about the effectiveness of MRT.

### **Summary of Literature**

The always changing scene of juvenile offenders and importance of including the often neglected issues of gender and race/ethnicity in intervention necessitate continued research in evaluating interventions for juvenile offenders. Cognitive Behavioral Therapy and more recently, Ecological-based interventions provide promising results for reducing

recidivism among juvenile offenders, in light of implementation concerns. A common theme among the intervention and juvenile offender literature includes the complex nature of influencing factors on juvenile criminal behaviors. Furthermore, due to the complex nature of juvenile criminal behavior, interventions implemented for this population need to address the various family factors, environmental factors, mental health factors, and many other factors for effectiveness. Overall, the inclusion of the family in intervention and therapy repeatedly surface as a necessity of intervention for juvenile offenders (Faw Stambaugh et al., 2007; Gavazzi, 2006; Gavazzi, Bostic et al., 2008; Gavazzi, Yarcheck et al., 2008; Hussey et al., 2008; Quinn & Van Dyke, 2004).

Research specific to testing MRT offers positive results for the effectiveness of the MRT program on decreasing external locus of control, increasing internal locus of control, decreasing the number of life problems, increasing family and friend support, increasing perceived purpose in life, and increasing principled moral reasoning. However, the majority of the juvenile offender research includes male juvenile offenders housed in the WHYDC, warranting research testing other groups and treatment facilities (Burnette, et al., 2003; Burnette et al., 2004). Despite the positive results associated with MRT, methodological concerns exist. According to SAMHSA's National Registry of Evidenced-based Programs and Practices, methodological concerns associated with evaluative MRT studies include possible confounding variables due to other interventions and services provided to participants as well as a lack of attention to and control for these possible confounding variables. A lack of in-depth information about the treatment and comparison group participants leads to questions about other possible explanations for the significant findings. With specific regard to the Defining Issues Test, a concern exists regarding validity.

According to the SAMHSA website, the DIT may be more closely measuring verbal skill rather than moral development.

Across Ecological-based intervention, CBT, and MRT, implementation concerns arise regarding accurate implementation of interventions independent of the developers in real world situations. When reviewing the overall literature, including both MRT and other intervention and therapy approaches, correct implementation of intervention and therapy by professionals not associated with the development of the intervention or therapy program continues as a concern for this area of research.

### **Research Questions**

Based on the literature review, the following research questions served as the focus of this study:

1. Do recidivism rates for juveniles who participated in Moral Reconciliation Therapy differ from the recidivism rates for juveniles who did not participate in Moral Reconciliation Therapy?
2. How is the number of steps completed of Moral Reconciliation Therapy related to recidivism (one year following discharge from Moral Reconciliation Therapy for the treatment group and one year following discharge from probation for the comparison group)?
3. How is the relationship between the number of steps completed of Moral Reconciliation Therapy and recidivism moderated by gender and race?
4. How accurately does the Juvenile Crime Prevention Risk Assessment predict recidivism one year following discharge from Moral Reconciliation

Therapy for the treatment group and one year following discharge from probation for the comparison group?

5. How accurately does the Juvenile Crime Prevention Risk Assessment predict recidivism across gender and racial groups?

## METHOD

Determining the effectiveness of MRT in reducing recidivism among juvenile offenders served as the primary purpose of this study. Along with evaluating recidivism rates between the treatment and comparison group, specific attention to the relationship between the number of MRT steps completed and recidivism allowed for replication of past MRT studies to determine if a positive significant relationship between the number of MRT steps completed and recidivism existed for a different juvenile offender population. To extend the current research evaluating MRT, the inclusion of gender and race as potential moderators aided in determining the roles of gender and race in juvenile offender recidivism.

The available JCP Risk Assessment (Oregon Juvenile Department Director's Association, 2006a) data for 287 juvenile offenders provided the opportunity to assess the validity of the risk assessment to predict recidivism. The inclusion of gender and race also allowed for evaluating if the JCP Risk Assessment differed in predictive validity based on gender or racial group.

### Procedure

The Iowa State University Institutional Review Board approved this dissertation research. Additionally, formal permission was obtained from the County Juvenile Department and the State of Oregon to utilize an existing database to explore the effectiveness of MRT relative to rate of recidivism with clients from that County Juvenile Department. Originally, employees of the County Juvenile Department contacted the researcher and indicated a desire to have her analyze their data to determine the effectiveness of MRT in their program. The state database, which included the county juvenile department data, contained information concerning race, gender, age of first referral, start and end dates

with the MRT and juvenile program, steps completed within the MRT program, information from the JCP Risk Assessment, and other information outside the scope of this research project. The researcher was not allowed access to the state database due to restricted access, so employees of the County Juvenile Department compiled a spreadsheet of information from the state database that tracked clients within their program from 2005 through April, 2009. These spreadsheets included all of the data from the state database applicable to exploring the research questions in this dissertation.

### **Participants**

The participants for this study were juvenile offenders involved in a County Juvenile Department located near an urban area in the Pacific Northwest. Juvenile offenders who participated in services within the County Juvenile Department beginning in 2005, whether or not they completed the MRT program, were included in the state database used for this study. Juveniles within the database were tracked through April, 2009, with specific attention on tracking each juvenile one year beyond discharge from MRT for the treatment group. The groups of juveniles described below ( $n = 375$  treatment group,  $n = 375$  comparison group,  $n = 287$  JCP Risk Assessment group) were all embedded in the total of 750 juvenile offenders included in the state database.

Of 375 juvenile offenders who started MRT, 77 completed it and 298 did not complete it in its entirety. Of the 375 participants in the MRT treatment group, 295 were male and 80 were female, with a mean age of 13.34 years at first referral. White juveniles accounted for 59.7% ( $n = 224$ ) of the participants, Hispanic accounted for 31.7% ( $n = 119$ ), African Americans, Asians, and Native Americans accounted for 5.3% ( $n = 20$ ), 2.4% ( $n = 9$ ), and 8% ( $n = 3$ ) respectively. Due to small numbers, African American, Asian, and Native

American were collapsed into one category (8.5%,  $n = 32$ ). Considering the possible problems related to collapsing three distinct racial/ethnic populations as well as the small sample despite combining the three groups into one, only the racial/ethnic groups of Hispanic and White were used for all analyses that included the variable race. The use of only two categories resulted in a clear limitation of this study especially due to previous ethnic- and race-related concerns presented in the literature review. However, inclusion of the Hispanic youth, not included in previous MRT research on juvenile offenders allowed for some expansion to a diverse population.

A comparison group of 375 juvenile offenders did not receive MRT but received other interventions and services, not detailed in the spreadsheet created from the state database. The comparison group contained 375 juvenile offenders randomly selected from the state data base. The comparison group consisted of 321 males and 54 females, with a mean age of 14.09 years at first referral. White juveniles accounted for 60.3% ( $n = 226$ ) of the participants, Hispanic juveniles accounted for 27.7 % ( $n = 104$ ) of the participants, and African American, Asian, Native American, and other/unknown accounted for 5.9% ( $n = 22$ ), 3.5% ( $n = 13$ ), 1.3% ( $n = 5$ ), and 1.3% ( $n = 5$ ) respectively.

The state requirement of completion of the JCP Risk Assessment for each juvenile offender occurred during the time of the tracking period; therefore, JCP Risk Assessment data were available for only 114 of the treatment group and 173 of the comparison group. Analyses that included all participants regardless of completion of the JCP Risk Assessment as well as separate analyses for participants with the completed JCP Risk Assessment were identified in the data analysis process. The demographic information for the 114 participants of the treatment group with completed JCP Risk Assessments included 88 males, 26 females,

53.5% ( $n = 61$ ) reported as White, 39.5% ( $n = 45$ ) reported as Hispanic, and 7% ( $n = 8$ ) reported as African American or Asian. The mean number of risk indicators was 12.62 out of a maximum of 30. The mean number of protective factors was 1.95 out of a maximum of 6 and a mean recidivism rate of .5263 (52.63%). The 173 participants within the comparison group who completed the JCP Risk Assessments consisted of 142 males and 31 females. White, Hispanic, and African American or Asian youth accounted for 56.1% ( $n = 97$ ), 34.7% ( $n = 60$ ), and 9.2% ( $n = 16$ ) respectively. The mean for risk indicators was 8.14 and the mean for protective factors was 3.16, with a mean recidivism rate of .23 (23%). The combined sample of 287 for all the participants with completed JCP Risk Assessments included 230 males and 57 females. White juveniles accounted for 55.1% ( $n = 158$ ) of the participants, Hispanic juveniles accounted for 36.6% ( $n = 105$ ), and African American, Asian, or Native American juveniles accounted for 8.4% ( $n = 24$ ). The mean value of recidivism was .35 (35%), the mean number of risk indicators was 9.92, and the mean number of protective factors was 2.68.

The 375 juveniles of the treatment group who participated in both MRT and other interventions were housed in a short term residential facility. The short term residential facility housed 18 male and female juveniles between 12 and 17 years of age who volunteered to participate in the residential program. Following an alleged violation of the law, conditional release, or probation violation, the Juvenile Court authorized the juvenile's participation in the residential facility rather than housing in detention. The facility operated as a short term program and evaluation program, which included services of a variety of educational programming from GED preparation to on-site school. Furthermore, the juveniles participated in a variety of outings with a focus on peer and relational skills and

group gatherings designed to promote various life skills, such as communication skills. The residential facility also included individual and family therapy contracted with mental health agencies. All juveniles also participated in Moral Reconciliation Therapy with an aim to promote increased moral reasoning and a positive self-image and identity. Staff who participated in MRT training, consisting of 32 hours over a period of five days facilitated the MRT group sessions (Moral Reconciliation Therapy, 2007). The residential facility operated on a “level” system with a total of five levels with each level associated with certain privileges and higher levels accompanied by more privileges. Violation of established rules, such as threats led to a variety of consequences, such as a level drop, additional charges, and/or detention. Possible privileges available for the juveniles included time with family away from the residential facility, phone privileges, an extension of an additional hour before bedtime, and time-limited walks away from the residential facility (D. Palmanteer, personal communication, June 2, 1999; Washington County Juvenile Department, 2008).

Beyond the various services in which the juveniles participated in while at the short-term residential facility, all juveniles received a weekly one-hour group session of MRT. A juvenile’s stay at the residential facility lasted from a minimum of one or two days, an abnormally short length of stay, to up to a few months. The average length of stay was 45 to 60 days. Within this amount of time, if a juvenile remained “on track” for treatment, the average level attained within MRT was step four or five out of a total of 12 steps (D. Palmanteer, personal communication, June 4, 2009; T. Fieken, personal communication, June 15, 2009).

Following discharge from the residential facility, the juvenile’s senior counselor determined the next step of treatment, which might or might not include MRT. At this time,

the senior counselor could refer the juvenile to the community center where s/he continued to receive MRT (D. Palmanteer, personal communication, June 2, 2009). The community center acted similar to an after school program, operating from 2:00 p.m. until 7:30 p.m. Tuesdays through Fridays and 10:00 a.m. until 2:00 p.m. on Saturdays. The community center also offered various other groups, such as groups with a focus on coping skills, conflict resolution, cognitive restructuring, and family support groups. Each group allowed up to 25 juveniles ranging in age from 12 to 19 years. Furthermore, all juveniles who participated in the community center met requirements of current involvement in probation. The MRT program provided in the community center also met one day a week for one hour. Juveniles who received MRT, but not through the residential facility or through the community center, received a one hour weekly group session through the juvenile department due to their specific involvement with gang activities (Lifeworks NW, 2008; T. Fieken, personal communication, June 15, 2009).

The county from which these participants were drawn reported recidivism rates for juvenile offenders ages 10 through 17, with recidivism defined as a legal referral for a felony or misdemeanor. The number of juvenile offenders age 10-17 per 1,000 who reoffended in 1999, 2000, 2001, 2002, 2003, 2004, 2005, and 2006 were 10.4, 9.7, 7.4, 6.5, 6.6, 6.2, 7.1, and 7.7 respectively (Washington County Juvenile Department, 2007, p. 26). Although recidivism decreased from 1999 to 2002, a slight increase since 2002 may represent a pattern of increased juvenile offender recidivism, which again highlighted the importance of effective treatment for reducing recidivism among juvenile offenders.

## **Variables**

Although the county collected more data on each juvenile offender than were analyzed for this study, the data for each juvenile offender for this study included group association (treatment or comparison group), gender, race, age, age of first referral, type of criminal offense, number of MRT steps completed, and data from the Juvenile Crime Prevention Risk Assessment (JCP Risk Assessment). Age of first referral within the tracking period was included for descriptive statistics only. The dependent or outcome variable, recidivism, was defined in several slightly different ways in the research literature; however, referrals during the year long tracking period was the definition used for recidivism in this study. Data collection occurred during interviews and through paper documentation at the time of the juvenile's first legal offense, scheduled reassessments, and subsequent offenses. As a result of certain juveniles who turned 18 during the tracking period and therefore aged out of the juvenile justice system, a county employee acquired the number of convictions in the adult system for those who turned 18. Due to the differences in the legal procedures between the juvenile and adult systems, convictions appeared as an appropriate measure of recidivism. Convictions did not include dismissed or pending charges.

## **Measurements**

**Juvenile Crime Prevention Risk Assessment.** The Oregon Juvenile Department Director's Association (OJDDA) created The Juvenile Crime Prevention Risk Assessment (JCP Risk Assessment) to assess for protective and risk factors of juvenile delinquency behaviors (Oregon Juvenile Department Director's Association, 2006a). Information gained from the assessment was used in determining appropriate intervention for juveniles. The current form of the JCP Risk Assessment used for this study reflects adaptations made in

2006. According to Seljan (2006), the domains of the JCP Risk Assessment were based on research, which supported the validity and reliability of the assessment. An inter-rater reliability of 90% was reported along with high correlations among risk questions and an 89% rating by assessors as a precise measure of risk (Seljan). The JCP Risk Assessment included the date of the initial assessment, where the assessment was completed, the name of the evaluator, and the date when the assessment was closed.

***Domains.*** The first domain within the assessment, identified as domain 1.0 *Demographic and JCP Program Evaluation Questions*, included questions such as the juvenile's ethnic, cultural, and racial background (Oregon's Juvenile Department Director's Association, 2006a, 2006b). Domains 2.0 through 7.0 were the risk domains of the assessment. Each risk domain included multiple questions identified as either a risk indicator (R) or a protective factor (PF). For each risk indicator question, possible responses were "yes," "more information needed," or "no." Also important to note was that only unshaded questions (some questions were shaded and some were on a white background) were included in the scores as opposed to the shaded questions which were used only for case planning only. The questions labeled as "C" indicated change over time (e.g., behaviors identified within the past month), and questions labeled as "T" were not included in the overall score, and were used only for case planning purposes. The JCP Assessment included the following risk domains followed by sample questions indicating both the protective factor and risk indicator questions if both existed:

\* 2.0 School Issues (e.g., "Significant school attachment/commitment"/"Chronic truancy")

- \* 3.0 Peer Relationships and Other Relationships (e.g., “Has friends who are academic achievers”/“Friends engage in unlawful or serious acting-out behavior”)
- \* 4.0 Behavior Issues, (e.g., “Involved in constructive extra-curricular activities”/“In past month, youth’s behavior has hurt others or put them in danger”)
- \* 5.0 Family Functioning (e.g., “Has close, positive, supportive relationship with at least one family member”/“History of reported child abuse/neglect or domestic violence”)
- \* 6.0 Substance Use, (e.g., “Current substance use is causing problems in youth’s life”)
- \* 7.0 Attitudes, Values, and Beliefs (e.g., “Youth talks about the future in a positive way with plans or aspirations of a better life”).

The risk domains were scored and added to obtain a total risk domain score. The total number of risk indicator and protective factor questions were scored and added for a total risk indicator score, and total protective factor score, respectively. Thus a higher total score on the risk indicators indicated a more negative assessment of the juvenile’s risk and a higher score on the protective factors indicated a more positive assessment of the juvenile’s risk (Oregon’s Juvenile Department Director’s Association, 2006a, 2006b).

Domain 8.0, Mental Health Indicators, included questions such as “Depressed or withdrawn.” The Mental Health Indicators signaled to evaluators the need for further mental health assessment or intervention. The domains 9.0, 10.0, 11.0, and 19.0 were termed inactive domains and therefore not part of the 2006 JCP Assessment. Domain 12.0 included the following:

- a. The total number of risk domains was scored by adding the number of domains with at least one risk indicator (mark of “yes” to a risk indicator question). The maximum total risk domains score was 6 (1 each for 2.0-7.0 above).
- b. The total number of risk indicators was scored by adding the number of “yes” responses to the questions identified as risk indicators (mark of “yes” to a risk indicator question). The questions were embedded within domains 2.0 through 7.0, with a maximum total risk indicators score of 30.
- c. The total number of protective factors was scored by adding the number of “yes” responses to the identified protective factor questions found in domains 2.0 through 7.0, with a maximum total protective factors score of 6.
- d. The total number of mental health indicators was the total number of “yes” responses to mental health indicator questions, with a maximum total mental health indicators score of 5.
- e. Also included in Domain 12.0 was the initial risk level, identified as “low,” “medium,” or “high.” A low level of risk was identified by 0-5 risk indicators, medium level of risk was identified by 6-13 risk indicators, and high level risk was identified by 14 or more risk indicators. However, specific risk indicators increased a low level risk level to a medium risk level; such specific risk indicators were 2.4, 3.6, 4.6, 4.7, 4.13, 4.14, and 6.4.

Domain 13.0 Violence Indicators was the total number of “yes” responses to questions 3.2, 4.4, 4.8, 4.9, or 8.5 (e.g., “Referred for a criminal offense at age 13 or younger”). If the juvenile was between the ages of 6 and 11, question 6.3 was also included as a violence indicator (“Substance use began at age 13 or younger”). Domain 14.0 began the

reassessment portion of the assessment (e.g., “Reason for JCP Reassessment: Scheduled Review”), and domain 15.0 Community Protection included questions such as “Most serious weapons charge since linked assessment.” An overall Community Protections Score was calculated with information about whether or not the juvenile had a new legal violation, status of the violation, whether it was a misdemeanor, a non-person felony, weapon related misdemeanor or felony, or a person-related felony. Lastly, the frequency of legal referrals was included to determine how many criminal related referrals occurred since the initial assessment (Oregon’s Juvenile Department Director’s Association, 2006a, 2006b).

The remaining last seven domains included:

- \* 16.0 Response to Supervision (e.g., “Compliance with technical terms of probation/supervision”)
- \* 17.0 Response to Accountability (e.g., “Completed or satisfactorily participating in accountability sanctions, as directed”)
- \* 18.0 Response to Skill Development and Treatment (e.g., “Completed or satisfactorily participating in treatment programs”)

Domains 20.0 Final Reassessment Score, 21.0 Final Assessment Risk Level, and 22.0 Completion and Locking of Reassessment presented final scores for the comprehensive assessment. Domains 14 through 20 were not considered part of the JCP Risk Assessment, since they were for reassessment only (Oregon’s Juvenile Department Director’s Association, 2006a, 2006b).

### **Data Analysis**

The coded data were received from the County Juvenile Department in a spreadsheet, saved as SPSS data, and double checked for accuracy relative to the code sheet. In

consultation with statistical personnel, data analysis included independent-samples *t* tests, an ANOVA, and regression statistical techniques to respond to the particular questions in light of the various limitations of the data. The dependent variable of interest, recidivism, was analyzed as a continuous variable, along with the independent variables of the number of MRT steps completed, JCP Risk Indicators, and JCP Protective factors. Prior to completing the regression analyses, the independent variable group association (treatment or comparison group) and the moderating variables gender and race were dummy coded due to the nominal nature of the variables. The treatment group was coded as “0” and the comparison group was coded as “1.” Male was coded as “0” and female was coded as “1.” For race, Hispanic was coded as “0,” White as “1,” and African American, Asian, and Native American were all collapsed into the code of “2,” although as stated previously, the code of “2” was eliminated from analysis. Interaction terms were created to determine the moderating effects of gender and race. Additionally, to determine possible developmental differences in participation in MRT and recidivism rates, ages 12 through 15 were coded as “0” and ages 16 and up were coded as “1.” Due to the smaller number of juveniles aged 12 through 14, only two categories were created; however, for future studies, three or more developmental categories would be more appropriate to determine the effectiveness of MRT at differing developmental stages.

The regression analyses for the JCP Risk Assessment were divided into two independent analyses due to the difficulty in combining the variables “number of risk indicators” and “number of protective factors” for a total JCP Risk Assessment value. Conceptually, combining the risk indicators and protective factors did not allow for valid assessment of the JCP Risk Assessment on recidivism. Furthermore, due to the correlation of

.825 between the total risk domains and the total risk indicators, only the variables of total risk indicators was utilized, which allowed for a continuum of 30 possible risk indicators. The unavailability of the specific psychometric properties for the variables of risk indicators and protective factors represented a limitation of this study. The 114 participants from the treatment group and 173 from the comparison group were included for the regression analyses that assessed for the predictive validity of the JCP Risk Assessment.

## RESULTS

Evaluating the effectiveness of MRT to reduce recidivism shaped the primary focus of this study. In addition, the analysis that included the number of MRT steps completed allowed for more understanding about the relationship between MRT and recidivism. A series of regression analyses were used to determine main effects and interaction effects of the independent variable of number of MRT steps completed, possible moderating variables of gender and race, and the dependent variable of recidivism.

Along with identifying the relationship between MRT and recidivism, information from a total of 287 juveniles with completed JCP Risk Assessments ( $n = 114$  from the treatment group and  $n = 173$  from the comparison group) allowed for testing the validity of the JCP Risk Assessment to predict recidivism. Gender and race were included as potential moderating variables to shed light on whether the JCP Risk Assessment differed in predictive validity based on gender or race.

Multiple regression analyses were used to evaluate the relationship between the outcome or dependent variable recidivism and multiple independent variables. Multiple regression analyses examined the amount of variance in recidivism explained by a single independent variable, combination of two independent variables, or the interaction between an independent and a moderating variable. Prior to running the regression analyses, three correlation tables were completed to give a better understanding of the relationships between the various variables (see Appendix). For interpretation of the following multiple regression analyses, model 1 referred to inclusion of two independent variables of interest and the dependent variable of recidivism. Model 2 included the two independent variables of interest for the specific regression along with the interaction term and recidivism.

### Recidivism Differences between the Treatment and Comparison Groups

An independent-samples  $t$  test to compare the recidivism means for the treatment group (375 juveniles who participated in MRT,  $M = .61$ ) and the comparison group (375 juveniles who did not participate in MRT,  $M = .53$ ) resulted in no significant differences with regard to recidivism,  $t = .823$ ,  $p = .41$  level (see Table 11). Therefore, participation in MRT did not significantly reduce recidivism for the juvenile offenders of this study.

Table 11

*The Recidivism Mean Difference between the MRT Treatment and Comparison Groups*

		$F$	$p$	$t$	$df$	Sig. (2-tailed)	Mean difference	$SE$ difference
Recidivism	Equal variances assumed	.915	.339	.823	748	.411	.085	.104
	Equal variances not assumed			.823	743. 168	.411	.085	.104

\* $p < .05$ .

An independent-samples  $t$  test for developmental or age-related differences approached statistical significance,  $p = .068$ , which suggested that the 12 through 15 year old juveniles who participated in MRT recidivated at a higher level ( $M = .40$ ) compared to the juveniles aged 16 and older ( $M = .25$ ) (see Table 12).

Table 12

*Age and Developmental Differences in the Relationship between MRT Participation and Recidivism*

		$F$	$p$	$t$	$df$	Sig. (2-tailed)	Mean difference	$SE$ difference
Recidivism	Equal variances assumed	12.3 6	.000	1.878	373	.061	.157	.084
	Equal variances not assumed			1.832	306. 584	.068	.157	.086

\* $p < .05$ .

Although a very limited number of the 375 juveniles who participated in MRT included documentation of offense type of a felony, misdemeanor, or violation, an ANOVA led to significant differences in recidivism rates between the groups (see Table 13). However, with deeper analysis, the significant differences in recidivism rates occurred between juveniles with felonies and juveniles with misdemeanors as well as between juveniles with felonies and juveniles with violations. No significant differences existed between juveniles with misdemeanors and juveniles with violations with regard to recidivism.

Table 13

*Difference in Recidivism for the Juveniles Who Participated in MRT Based on Offense Type*

Recidivism	<i>SS</i>	<i>df</i>	<i>MSE</i>	<i>F</i>	<i>p</i>
Between Groups	14.805	2	7.402	7.651	.001
Within Groups	62.886	65	.967		
Total	77.691	67			

\* $p < .05$ .

### **Moral Reconciliation Therapy® Steps and Recidivism**

To answer the question regarding the relationship between the number of MRT steps completed and recidivism, a simple linear regression analysis of the 375 participants who participated in MRT was conducted. The regression analysis indicated that the number of MRT steps completed did not significantly influence the level of recidivism (see Table 14). The  $R$  value of .016 showed a very low correlation between the two variables and  $R^2 = .000$ , indicated the number of MRT steps completed explained 0% of the variance in recidivism. The combined results indicated that the number of MRT steps completed did not significantly impact the level of recidivism.

Table 14  
*Simple Regression Analysis for the Number of MRT Steps Completed and the Dependent Variable of Recidivism*

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Regression	.208	1	.208	.095	.758
Residual	814.950	373	2.185		
Total	815.157	374			

Note.  $R = .016$ ;  $R^2 = .000$ .

\* $p < .05$ .

To determine the influence of race on the relationship between the number of MRT steps completed and recidivism, an interaction term was produced and entered into a multiple regression with the number of MRT steps completed. The independent variables of number of MRT steps completed and race in model 1 did not significantly impact recidivism ( $F = .611$ ,  $p = .543$ ). The  $F$ -value of .728 ( $p = .536$ ) indicated no significant interaction between the number of MRT steps completed and race (see Table 15). Model 1 with variables number of MRT steps completed and race produced a multiple  $R$  value of .060 and an  $R^2$  value of .004. The model which incorporated the interaction term between MRT steps completed and race produced a multiple  $R$  value of .080, an  $R^2$  value of .006, which continued to show a lack of association between the number of MRT steps completed and recidivism even with the addition of race.

Table 15

*The Relationship between the Number of MRT Steps Completed and Recidivism with the Addition of Race as a Potential Moderator*

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model 1					
Regression	2.786	2	1.393	.611	.543
Residual	775.289	340	2.280		
Total	778.076	342			
Model 2					
Regression	4.983	3	1.661	.728	.536
Residual	773.093	339	2.281		
Total	778.076	342			

Note.  $R = .060$ ;  $R^2 = .004$  for model 1.  $R = .080$ ;  $R^2 = .006$  for model 2.

\* $p < .05$ .

The individual regression coefficients for the number of MRT steps completed, race, and the interaction term further indicated a lack of significant variance in recidivism explained by the number of MRT steps completed and race of the juvenile (see Table 16).

Table 16

*Regression Coefficients for the Number of MRT Steps Completed, Race, the Interaction Term, and the Dependent Variable of Recidivism*

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	<i>B</i>	<i>SE</i>	$\beta$		
Model 1					
(Constant)	.642	.136		4.713	.000
MRT steps completed	-.007	.021	-.019	-.350	.727
Model 2					
(Constant)	.776	.187		4.151	.000
MRT steps completed	-.010	.021	-.027	-.491	.287
Race	-.181	.173	-.057	-1.049	.295
Model 3					
(Constant)	.921	.238		3.865	.000
MRT steps completed	-.035	.032	-.090	-1.066	.287
Race	-.411	.291	-.130	-1.412	.159
Interaction term (MRT steps completed and race)	.042	.043	.104	.981	.327

\* $p < .05$ .

Table 17 shows the results with gender added to the model to explore the interaction effects between gender and number of MRT steps completed. The inclusion of gender in

combination with MRT steps completed approached significance ( $F = 2.926, p = .055$ ); the addition of the interaction term was not significant ( $F = 1.947, p = .122$ ). Model 1, which consisted of the two independent variables, resulted in a multiple  $R$  of .124 and an  $R^2$  of .015. With the inclusion of the interaction term, the multiple  $R$  changed slightly to .125 with an  $R^2$  of .016; the number of MRT steps completed and gender accounted for only 1.6% of the variance in recidivism.

Table 17  
*Relationship between the Number of MRT Steps Completed and Recidivism with the Addition of Gender as a Possible Moderator*

Model	SS	df	MS	F	p
Model 1					
Regression	12.625	2	6.312	2.926	.055
Residual	802.533	372	2.157		
Total	815.157	374			
Model 2					
Regression	12.638	3	4.213	1.947	.122
Residual	802.519	371	2.163		
Total	815.157	374			

Note.  $R = .124$ ;  $R^2 = .015$  for model 1.  $R = .125$ ;  $R^2 = .016$  for model 2.

\* $p < .05$ .

In further examination of the regression coefficients, gender continued as the only significant variable ( $p = .017$ ); the interaction term was not significant, indicating that within this study, the interaction between gender and the number of MRT steps did not account for any change in recidivism (see Table 18).

Table 18  
*Regression Coefficients for the Number of MRT Steps Completed, Gender, the Interaction Term, and Recidivism*

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	<i>B</i>	<i>SE</i>	$\beta$		
Model 1					
(Constant)	.743	.133		5.575	.000
MRT steps completed	-.007	.019	-.019	-.371	.711
Gender	-.444	.185	-.123	-2.399	.017
Model 2					
(Constant)	.739	.142		5.191	.000
MRT steps completed	-.006	.022	-.017	-.299	.765
Gender	-.425	.312	-.118	-1.360	.175
Interaction term (MRT steps completed and gender)	-.004	.050	-.007	-.079	.937

\* $p < .05$ .

### JCP Risk Assessment and Recidivism

Two initial simple linear regression analyses of the total 287 participants with completed JCP Risk Assessments were used to determine the main effects of a) risk indicators and b) protective factors on recidivism. Table 19 shows the significant impact of risk indicators on recidivism ( $F = 11.469$ ,  $p = .001$ ). The multiple  $R$  and  $R^2$  values were .196 and .038 respectively; therefore, risk indicators predicted 3.8% of the variance in recidivism.

Table 19  
*Relationship between Risk Indicators and Recidivism*

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model 1					
Regression	10.104	1	10.104	11.469	.001
Residual	253.720	288	.811		
Total	263.824	289			

Note.  $R = .196$ ;  $R^2 = .038$ .

\* $p < .05$ .

The analysis to determine the predictive ability of protective factors on recidivism also resulted in a significant relationship ( $F = 8.990, p = .003$ ), although somewhat less than the predictive ability of risk indicators (see Table 20). The values of the multiple  $R$  and  $R^2$ , .174 and .030 respectively, indicated a .174 correlation between protective factors and recidivism, with 3% of the variance in recidivism predicted by the number of protective factors.

Table 20  
*Relationship Between Protective Factors and Recidivism*

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model 1					
Regression	7.986	1	7.986	8.990	.003
Residual	255.838	288	.888		
Total	263.824	289			

Note.  $R = .174$ ;  $R^2 = .030$

\* $p < .05$ .

Additional analyses to find the possible moderating effects of race led to significant results for model 1 ( $F = 5.277, p = .006$ ) (the independent variables of risk indicators and race). The  $F$ -value of 3.599 ( $p = .015$ ) indicated a significant amount of variance in recidivism predicted by the combination of risk indicators, race, and the interaction of risk indicators and race (see Table 21). For model 1 the multiple  $R$  and  $R^2$  values were .196 and .039 respectively. For model 2, which included the interaction term, the multiple  $R$  and  $R^2$  values were .198 and .039 respectively.

Table 21  
*Relationships Among Risk Indicators, Race, the Interaction Term, and Recidivism*

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model 1					
Regression	9.550	2	4.775	5.277	.006
Residual	237.999	263	.905		
Total	247.549	265			
Model 2					
Regression	9.693	3	3.231	3.559	.015
Residual	237.856	262	.908		
Total	247.549	265			

Note.  $R = .196$ ;  $R^2 = .039$  for model 1.  $R = .198$ ;  $R^2 = .039$  for model 2.

\* $p < .05$ .

The significance for the regression coefficients ( $p = .399$  for race in model 1,  $p = .908$  for race in model 2, and  $p = .692$  for the interaction term in model 2) supported the primary influence of risk indicators on recidivism compared to race or the interaction between risk indicators and race (see Table 22). Therefore, within both models, risk indicators ( $p = .002$  and  $p = .02$  in models 1 and 2 respectively) appeared to be the primary reason for the predictive ability of recidivism in the two overall models.

Table 22  
*Regression Coefficients for Risk Indicators, Race, the Interaction Term, and Recidivism*

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	<i>B</i>	<i>SE</i>	$\beta$		
Model 1					
(Constant)	.114	.133		.854	.394
Risk indicators	.029	.009	.187	3.083	.002
Race	-.101	.119	-.051	-.845	.399
Model 2					
(Constant)	.070	.173		.407	.684
Risk Indicators	.033	.014	.214	2.333	.020
Race	-.026	.223	-.013	-.115	.908
Interaction term (risk indicators and race)	-.008	.019	-.052	-.397	.692

\* $p < .05$ .

Adding gender to the relationship between risk indicators and recidivism enhanced

the predictive ability compared to the addition of race. Model 1, with the two independent variables of risk indicators and gender, was significant ( $F = 9.018, p = .000$ ), as was the model with the addition of the interaction term consisting of the variables of risk indicators and gender ( $F = 6.163, p = .000$ ) (see Table 23). The multiple  $R$  of .243 and the  $R^2$  value of .059 changed to .249 and .061 respectively between model one and model two. The 6.1% of the variance in recidivism predicted by the independent variables of risk indicators and gender and the interaction term represented the largest amount of explained variance in recidivism for all analyses of this study.

Table 23

*Relationship between Risk Indicators, Gender, the Interaction Term, and Recidivism*

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model 1					
Regression	15.600	2	7.800	9.018	.000
Residual	248.224	287	.865		
Total	263.824	289			
Model 2					
Regression	16.019	3	5.340	6.163	.000
Residual	247.805	286	.866		
Total	263.824	289			

Note.  $R = .243; R^2 = .059$  for model 1.  $R = .249; R^2 = .061$  for model 2.

\* $p < .05$ .

The regression coefficients indicated significant contributions by risk indicators and gender in the explanation of recidivism (see Table 24). However, gender lost significance with the addition of the interaction term ( $p = .461$ ).

Table 24

*Regression Coefficients for Risk Indicators, Gender, the Interaction Term, and Recidivism*

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	<i>B</i>	<i>SE</i>	$\beta$		
Model 1					
(Constant)	.098	.105		.935	.351
Risk indicators	.032	.009	.209	3.632	.000
Gender	-.348	.138	-.145	-2.521	.012
Model 2					
(Constant)	.065	.115		.560	.576
Risk indicators	.036	.010	.231	3.505	.001
Gender	-.193	.262	-.081	-.739	.461
Interaction term (risk indicators and gender)	-.014	.021	-.081	-.696	.487

\* $p < .05$ .

The results presented in Table 25 indicated significant effects of protective factors and race ( $p = .005$ ) and protective factors, race, and the interaction term (protective factors and race) ( $p = .006$ ) on recidivism. The multiple  $R$  value of .199 in model 1 increased to .216 for model 2. The  $R^2$  of .040 in model 1 increased to .047 in model 2, indicating that protective factors, gender, and the interaction term predicted 4.7% of the variance in recidivism.

Table 25

*Significance of Protective Factors, Race, and the Interaction Between Protective Factors and Race on Recidivism*

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model 1					
Regression	9.844	2	4.922	5.446	.005
Residual	237.705	263	.904		
Total	247.549	265			
Model 2					
Regression	11.588	3	3.863	4.289	.006
Residual	235.960	262	.901		
Total	247.549	265			

Note.  $R = .199$ ;  $R^2 = .040$  for model 1.  $R = .216$ ;  $R^2 = .047$  for model 2.\* $p < .05$ .

Review of the significance for the regression coefficients showed nonsignificance for

race or the interaction term (for race,  $p = .343$  in model 1 and  $p = .351$  in model 2; for the interaction,  $p = .165$ ) leading to the conclusion that protective factors supplied the primary influence when predicting recidivism and it did not differ by race (see Table 26).

Table 26  
*Regression Coefficients for Protective Factors, Race, the Interaction Term, and Recidivism*

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	<i>B</i>	<i>SE</i>	$\beta$		
Model 1					
(Constant)	.672	.124		5.422	.000
Protective factors	-.099	.032	-.190	-3.137	.002
Race	-.113	.119	-.057	-.949	.343
Model 2					
(Constant)	.825	.166		4.984	.000
Protective factors	-.158	.052	-.301	-3.004	.003
Race	-.356	.211	-.181	-1.686	.093
Interaction term (protective factors and race)	.091	.066	.188	1.392	.165

\* $p < .05$ .

A similar pattern was found when gender was added to model 1 (see Table 27) which looked at the independent variables of protective factors and gender as predictors of recidivism ( $F = 7.713$ ,  $p = .001$ ). Model 2 included the independent variables of protective factors and gender and the interaction term between protective factors and gender, which also significantly predicted recidivism ( $F = 5.279$ ,  $p = .001$ ). For model 1, the multiple  $R$  was .226,  $R^2$  was .051 and they increased slightly to .229 for the multiple  $R$  and .052 for  $R^2$  in model 2. Therefore, for model 2, protective factors, gender, and the interaction term all in combination predicted or accounted for 5.2% of the variance in recidivism.

Table 27  
*Relationship Between Protective Factors, Gender, the Interaction Term, and Recidivism*

Model	SS	df	MS	F	p
Model 1					
Regression	13.457	2	6.728	7.713	.001
Residual	250.367	287	.872		
Total	263.824	289			
Model 2					
Regression	13.841	3	4.614	5.279	.001
Residual	249.983	286	.874		
Total	263.824	289			

Note.  $R = .226$ ;  $R^2 = .051$  for model 1.  $R = .229$ ;  $R^2 = .052$  for model 2.

\* $p < .05$ .

Review of the partial regression coefficients for protective factors, gender, and the interaction between the two independent variables indicated a significant unique contribution by protective factors ( $p = .001$ ) and gender ( $p = .013$ ) in model 1, and for model 2 the significance values were  $p = .002$  for protective factors,  $p = .039$  for gender, and  $p = .508$  for the interaction term (see Table 28). Both of the independent variables predicted a significant portion of variance of recidivism; however, the interaction term did not.

Table 28  
*Regression Coefficients for Protective Factors, Gender, the Interaction Term, and Recidivism*

Model	Unstandardized coefficients		Standardized coefficients	t	p
	B	SE	$\beta$		
Model 1					
(Constant)	.680	.104		6.565	.000
Protective factors	-.098	.030	-.188	-3.259	.001
Gender	-.347	.139	-.145	-2.504	.013
Model 2					
(Constant)	.710	.113		6.287	.000
Protective factors	-.109	.034	-.209	-3.185	.002
Gender	-.464	.224	-.193	-2.071	.039
Interaction term (protective factors and gender)	.048	.073	.064	.663	.508

\* $p < .05$ .

An additional analysis of the relationship between the substance use domain of the

JCP Risk Assessment and recidivism allowed for a more in-depth look at this sub-population of juvenile offenders. Research and intervention within the juvenile offender population often separated those with substance use issues, similar to how the MRT research evaluated adults with specific DWI offenses. However, a regression analysis determined no significant predictive association between the substance use domain and recidivism ( $F = .635, p = .639$ ).

### **Gender, Race/Ethnicity and Recidivism**

Due to finding more significant results for gender than for race, independent-samples  $t$  tests were performed to determine if mean differences in recidivism existed based on race and gender. The recidivism means between the two racial groups did not differ significantly at the  $p < .05$  level ( $p = .322$ ) for the treatment group ( $n = 375$ ). Within the 375 juveniles who completed MRT, the mean recidivism rate of the Hispanic juveniles was .71 compared to .54 for White juveniles. The recidivism means between the two racial groups did not differ significantly at the  $p < .05$  level, ( $p = .273$ ) for all those who completed the JCP Risk Assessment ( $n = 287$ ). For all JCP Risk Assessment completers, the mean for recidivism was .42 for Hispanic juveniles and .28 for White juveniles, or 42% and 28% respectively.

Regarding gender and recidivism, for the MRT treatment group,  $p = .001$ , significant at the  $p < .05$  level, indicated a significant difference in mean recidivism rates between males and females. The mean value of recidivism for males in the MRT treatment group was .71 compared to females who averaged .26. Therefore, the recidivism rate for males and females, measured by the number of referrals as well as the number of convictions for the juveniles who turned 18, resulted in a 71% recidivism rate for males in the MRT treatment group and a 26% recidivism rate for the females in the MRT treatment group. Specific to the JCP Risk Assessment completers and gender, the independent-samples  $t$  test resulted in  $p = .003$ ,

significant at the  $p < .05$  level, which indicated a significant difference in recidivism rates between males and females. The mean recidivism rate for males in the JCP completer group was .41 compared to .11 for females. The results supported the conclusion that overall the means for recidivism differed significantly between males and females.

## DISCUSSION

### Limitations

Limitations to this study include limitations similar to other evaluative research on juvenile offenders, including lack of control over possible influential variables. Throughout the literature review, attention to the complex factors influencing juvenile offending offers both an intriguing picture to study as well as an overwhelming task in including all possible variables affecting juvenile recidivism. Certain information such as past and present interventions other than participating in MRT, not available and therefore not included in this study, lead to questions about what other possible variables that might affect recidivism. Due to the complex nature of recidivism, it seems next to impossible to attempt to tease apart the effects of the individual characteristics, family, relational, and societal variables on recidivism. Also, it seems likely that a juvenile with long term involvement in the juvenile system likely participated in several interventions over time, again leading to the question – what really influences recidivism? Therefore, control of other interventions, among other variables, are needed for future studies of factors that lead to decreased recidivism. The list of possible variables seems almost endless, which conflicts with a parsimonious model for clearly understanding juvenile recidivism.

Type of offense (i.e., felony, misdemeanor) represents one influential variable of juvenile recidivism, only partially evaluated in this study due to information about offense type documented for a very limited number of juveniles. The lack of information about offense types for all the juveniles included within this study limited accurate measurement of how type of offense influenced the relationship between participation in MRT and recidivism.

Additionally, the juveniles who participated in MRT volunteered, therefore possibly creating a sampling bias. Random assignment of juvenile offenders to a treatment and comparison group would have aided in reducing alternative explanations, increased control of possible influential and confounding variables, and limited the sampling bias. Furthermore, similar to other studies focused on the outcome variable of recidivism, the use of a state database did not measure for recidivism which occurred out of state, therefore, possibly missing other referrals and convictions.

The JCP Risk Assessment was not included for all participants, leading to a smaller sample size with an even smaller number of female participants and participants in each racial group. The JCP Risk Assessment included several variables that could be studied in the future, such as specific attention to domains (e.g., peer relationships and other relationships) to determine if the assessment was valid and reliable for a diverse population of juvenile offenders. While extension to the Hispanic and female juvenile offender population added to the understanding of recidivism, the juveniles who comprised the sample for this study were from one county, thereby reducing the generalization of results to other juvenile populations. The need to examine patterns as well as unique outcomes across and between varying juvenile populations warrants continued exploration.

Acknowledgement of limitations within the research of juvenile offenders and recidivism allows for greater insight and understanding of methodological issues within this field of research, which can lead to a higher quality in research design. Despite the limitations to this study and the overall research area of juvenile offenders, each study's significant findings as well as acknowledged limitations supplies valuable information for future research.

## **Discussion**

The primary goal of the current study – to determine the effectiveness of MRT in reducing recidivism – resulted in a lack of support for MRT. Although Burnette et al. (2004b) found a reduced recidivism rate of 13.3% for juveniles who participated in MRT, no significant differences in recidivism rates emerged between the treatment and comparison group for the current study. This result also contradicted previous evaluative MRT research that included reduced levels of recidivism for adults following participation in MRT. In addition, there was no significant relationship between the number of MRT steps completed and recidivism, which contrasted past research, such as the study by Burnette et al. (1991a), which resulted in a negative relationship between the number of MRT steps completed and recidivism for adults with drug abuse issues. Furthermore, the results indicated no significant moderating effects for race or gender and no significant differences in recidivism based on the juvenile's age at the time of MRT participation. However, a significant relationship between offense type and recidivism for those who participated in MRT warranted future research to adequately evaluate the influence of type of offense.

The results from the current study paralleled the lack of significant findings in recidivism between a juvenile offender MRT treatment group and a juvenile offender comparison group in Armstrong's 2003 study. The Armstrong study also represented an independent evaluation of MRT with juvenile offenders. The juveniles within the current study represented a more diverse and different population compared to other MRT evaluative research. The lack of statistically significant findings from this data raises question regarding whether implementation of MRT can reduce recidivism among a diverse population; it also

raises questions about whether MRT can be implemented in a “real world” situation without the prior knowledge and understanding of the developers.

Although the lack of statistically significant results in this study contradicted other research based on an adult population, it is difficult to compare results due to the developmental differences between juveniles and adults, not only in the case of moral development, but in a variety of other developmental differences. Eisenberg, Cumberland, et al. (2005) found developmental differences in moral behaviors, such as helping others throughout the adolescent and young adulthood ages, which may influence the effectiveness of MRT based on different age groups. Furthermore, Carlo et al. (1999), Hart and Carlo (2005), Paciello et al. (2008), and Spinrad et al. (2007a, 2007b) found support for contextual factors, such as family and peers in relation to moral development. With the ongoing research exploring moral development and the results that indicated the importance of contextual factors in the process of growing moral development, the research warrants an explicit inclusion of the contextual factors in intervention beyond a dialogue about the contextual factors.

Gavazzi (2006) discussed the neglected area of comprehensive valid and reliable risk assessments for juvenile offenders. The JCP Risk Assessment included multiple domains that appeared to tap into the multiple systems within the life of a juvenile offender and therefore possibly influencing factors in risk and protection for recidivism. Gavazzi, Gavazzi, Bostic, et al (2008), and Gavazzi, Yarcheck et al. (2008) included gender and race/ethnicity issues within the evaluation of risk assessment, which tested the concern stated by Schwalbe et al. (2006) that risk assessments did not always adequately assess for risk across diverse populations. The results from the current study supported the predictive validity of the risk

indicators and protective factors (JCP Risk Assessment) as independent predictors of recidivism. Furthermore, the inclusion of both race and gender, but primarily gender, led to a significant contribution of all the independent variables of risk indicators, protective factors, race, gender, and interactions between the independent variables in significantly predicting recidivism. The variables of risk indicators and protective factors carried the majority of the predictive value of recidivism; however, partial coefficients for gender, but not race, showed that for both the relationship between risk indicators and protective factors and recidivism, gender supplied an important piece for predicting recidivism.

The variables of risk indicators and protective factors both offered significant results in predicting recidivism, a primary goal of risk assessments. The negative significant relationship between protective factors and recidivism supported the idea that a juvenile with more protective factors would be less likely to recidivate. The positive significant relationship between risk indicators and recidivism also paralleled intuition that juveniles with a higher number of risk factors would be associated with a higher likelihood of recidivism.

That risk indicators and protective factors of the JCP Risk Assessment predicted recidivism and this can play an important role in the lives of juvenile offenders and the professionals working with them. Valid assessments allow for appropriate intervention in order to avoid unnecessarily intense services for those at low risk to reoffend and to avoid leaving a higher risk juvenile in need of help without appropriate and beneficial services. Continued use and evaluation of the JCP Risk Assessment can offer professionals another tool in helping juvenile offenders directly and in return, indirectly help their families, community, and society.

## **Implications**

Although several limitations exist within this study, the addition of Hispanic and female youth as well as the collection of recidivism data a year following discharge adds a piece to the juvenile recidivism puzzle. The inclusion of Hispanic and female youth addresses the concern about lack of attention to diverse juvenile populations stated in the literature (Baffour, 2006; Barrett et al., 2006; Gavazzi, 2006). Juvenile recidivism reaches many fields, including intervention, policy, legal, and education, among several others. Therefore, professionals involved with juvenile offenders in one capacity or another can integrate findings from this study in their repertoire to provide effective services.

As research continues to expand our understanding of the complex nature of juvenile offenders and successful intervention, those working with juvenile offenders need to remain in touch with the current literature and be open to adapting the system to adequately address the needs of the juvenile offenders for the sake of not just the juvenile offenders, but society overall. The juvenile court system, with the very important responsibility of maintaining the safety of society, may benefit from the multiple perspectives concerning what makes juvenile offender programming successful.

Randall and Cunningham (2003) mentioned a previous lack of effective treatment, in large part due to ignoring the juvenile's complex world — not taking into account the importance of context. Furthermore, when juveniles participated in a traditional approach, such as a residential-based treatment, and then returned to their natural home environment that remained unchanged, the chances of the juvenile to maintain the positive changes was quite unlikely.

To expect juveniles to maintain new behaviors in an environment that may not have taught, supported, or been able to instill these new healthy behaviors appears to be a cycle set up for failure for the juvenile. In a situation in which the juvenile explicitly or implicitly may need to choose between the new healthy behaviors and family and other significant people, despite how dysfunctional the family and relationships may be, what choice would the juvenile make? To an outsider, the ramifications of taking juveniles out of their natural setting, “fixing” them, and then returning them to the previous unchanged environment may seem so obviously contradictory, yet it is a traditional and historical process of rehabilitating or perhaps the more appropriate term, punishing, the juvenile. And what is the source of the criminal behaviors? An Ecological conceptualization would provide for a complex answer to this question, meaning, to address the issue of recidivism among juvenile offenders, in hopes of a long-term solution of reducing recidivism and increasing healthier well-being for the juveniles, a comprehensive-based intervention is strongly necessitated. Therefore, it is a question of the true goal of intervention, a band-aid approach that includes a possibly strict, inappropriately intense punishment, or intervention that aims to reduce recidivism through juvenile, family, and system well-being. “Although family-based professionals may tend to view as axiomatic the view that family is perhaps the most important extralegal variable of them all, members of our field must keep in mind that the juvenile justice field does not always share our deep appreciation for the primacy of the family” (Gavazzi, 2006, p. 195).

In light of the lack of support for MRT based on the current study and the methodological concerns of other MRT research, the significant findings from Baffour (2006), Trupin et al. (2002), Faw Stambaugh et al. (2007), Huey et al. (2000), Pullmann et al. (2006), Randall and Cunningham (2003), Schaeffer and Borduin (2005), Smith (2006), and

Timmons-Mitchell et al. (2003) who all found support for cognitive-behavioral or Ecological Theory-based interventions, despite implementation concerns similar to MRT, appear as even more meaningful. Furthermore, the support for family inclusion in intervention (Hussey et al., 2008; Perkins-Dock, 2001; Quinn & Van Dyke, 2004; Sondheimer, 2001) and support for contextual factors of recidivism (Bronstein et al., 2007; Hart et al., 1999; White & Matawie, 2004) carry many implications for those who determine what interventions to implement with juvenile offenders.

### **Directions for Future Research**

Very little research has evaluated the effectiveness of MRT with juvenile offenders, especially in regard to its effectiveness with diverse racial/ethnic populations and females. Considering the great importance of providing evidence-based, high quality treatment to juvenile offenders with the goal of reducing recidivism as well as supporting and guiding juvenile offenders to healthier behaviors, relationships, and overall well-being, replication of valid studies to provide a greater understanding of what works for reducing recidivism among the juvenile offender population and what does not work is badly needed.

A meaningful addition to this area of research may involve a qualitative look at juveniles' experiences with the juvenile court system, various interventions, detention centers, and other systems included in the juvenile offender experience. A qualitative study of juveniles may offer another perspective about what works in addition to what the numbers tell us. As decisions about consequences and interventions for juvenile offenders continue to evolve, policy changes such as the Juvenile Justice and Delinquency Prevention Act instill a sense of concern about how decisions are made for juvenile offenders. Although research evaluating MRT as well as other interventions is still needed, research does exist and needs

to be taken into account by those in positions with the great responsibility of determining what happens to the youth involved in the juvenile court system. A balance of understanding factors of juvenile recidivism and how to promote responsibility in juvenile offenders for behavior requires knowledge about juvenile offenders.

From a systemic viewpoint, although methodological limitations exist for MRT research, this is not to say that inclusion of moral reasoning and concrete CBT interventions are not valuable; clearly due to the research presented regarding moral development, CBT interventions are valuable. Interventions aimed to promote a positive identity, healthy relationships, responsibility, and moral reasoning, can provide a crucial role in comprehensive intervention designed to meet the complex needs of juvenile offenders. However, due to the complex nature of juvenile offending it seems naïve and disadvantageous to believe in a one-size-fits-all approach to intervention. Through the use of valid and comprehensive risk assessments and understanding the research which evaluates the multiple interventions that strive to reduce recidivism, professionals can implement interventions that truly match a juvenile's needs rather than place the juvenile in a barrage of interventions that miss the core factors for the juvenile's delinquent behavior.

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### APPENDIX: CORRELATION TABLES

Table 1

*Correlations Among Gender, Race, Recidivism, the Number of MRT Steps Completed, and the Interactions Terms*

Variable		Gender	Race	Recidivism	MRT Steps Completed	Interaction: MRT Steps and Race	Interaction: MRT Steps and Gender
Gender	Pearson Correlation	1	.135*	-.123*	-.025	.049	.770**
	Sig. (2-tailed)		.012	.017	.624	.369	.000
	N	375	343	375	375	343	375
Race	Pearson Correlation	.135*	1	-.054	-.138*	.615**	.045
	Sig. (2-tailed)	.012		.322	.010	.000	.411
	N	343	343	343	343	343	343
Recidivism	Pearson Correlation	-.123*	-.054	1	-.016	-.022	-.102*
	Sig. (2-tailed)	.017	.322		.758	.687	.048
	N	375	343	375	375	343	375
MRT Steps Completed	Pearson Correlation	-.025	-.138*	-.016	1	.510**	.259**
	Sig. (2-tailed)	.624	.010	.758		.000	.000
	N	375	343	375	375	343	375
Interaction MRT Steps Race	Pearson Correlation	.049	.615**	-.022	.510**	1	.206**
	Sig. (2-tailed)	.369	.000	.687	.000		.000
	N	343	343	343	343	343	343
Interaction MRT Steps Gender	Pearson Correlation	.770**	.045	-.102*	.259**	.206**	1
	Sig. (2-tailed)	.000	.411	.048	.000	.000	
	N	375	343	375	375	343	375

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 2  
*Correlations Among Gender, Race, Risk Indicators, Interaction Terms, and Recidivism*

Variable		Gender	Race	Risk Indicators	Interaction: Risk Indicators and Gender	Interaction: Risk Indicators and Race	Recidivism
Gender	Pearson Correlation	1	.025	.091	.824**	.137*	-.126*
	Sig. (2-tailed)		.681	.124	.000	.025	.032
	N	290	266	290	290	266	290
Race	Pearson Correlation	.025	1	-.058	.063	.708**	-.062
	Sig. (2-tailed)	.681		.348	.303	.000	.314
	N	266	266	266	266	266	266
Risk Indicators	Pearson Correlation	.091	-.058	1	.351**	.488**	.196**
	Sig. (2-tailed)	.124	.348		.000	.000	.001
	N	290	266	290	290	266	290
Interaction Risk Indicators Gender	Pearson Correlation	.824**	.063	.351**	1	.305**	-.066
	Sig. (2-tailed)	.000	.303	.000		.000	.264
	N	290	266	290	290	266	290
Interaction Risk Indicators Race	Pearson Correlation	.137*	.708**	.488**	.305**	1	.044
	Sig. (2-tailed)	.025	.000	.000	.000		.479
	N	266	266	266	266	266	266
Recidivism	Pearson Correlation	-.126*	-.062	.196**	-.066	.044	1
	Sig. (2-tailed)	.032	.314	.001	.264	.479	
	N	290	266	290	290	266	290

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Table 3  
*Correlations Among Gender, Race, Protective Factors, and the Interaction Terms*

Variable		Gender	Race	Recidivism	Protective Factors	Interaction: Protective Factors and Gender	Interaction: Protective Factors and Race
Gender	Pearson Correlation	1	.025	-.126*	-.099	.732**	-.082
	Sig. (2-tailed)		.681	.032	.091	.000	.178
	N	290	266	290	290	290	268
Race	Pearson Correlation	.025	1	-.062	.024	-.023	.672**
	Sig. (2-tailed)	.681		.314	.695	.711	.000
	N	266	266	266	266	266	266
Recidivism	Pearson Correlation	-.126*	-.062	1	-.174**	-.129*	-.117
	Sig. (2-tailed)	.032	.314		.003	.028	.056
	N	290	266	290	290	290	268
Protective Factors	Pearson Correlation	-.099	.024	-.174**	1	.246**	.610**
	Sig. (2-tailed)	.091	.695	.003		.000	.000
	N	290	266	290	290	290	268
Interaction Protective Factors Gender	Pearson Correlation	.732**	-.023	-.129*	.246**	1	.085
	Sig. (2-tailed)	.000	.711	.028	.000		.164
	N	290	266	290	290	290	268
Interaction Protective Factors Race	Pearson Correlation	-.082	.672**	-.117	.610**	.085	1
	Sig. (2-tailed)	.178	.000	.056	.000	.164	
	N	268	266	268	268	268	268

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).