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The Efficacy of Aggression Replacement Training with Female Juvenile Offenders in a Residential Commitment Program

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The Efficacy of Aggression Replacement Training® with Female Juvenile Offenders in a Residential Commitment Program

by

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Abstract

Female adolescents are increasingly being charged with crimes of violence, and the literature is lacking as to how best to reduce their aggressive tendencies. In the past, girls represented a small portion of all youths involved in criminal justice systems, and studies involving effective treatment options for them were rarely conducted.

Aggression Replacement Training® is a 10-week, evidence-based, group treatment intervention designed to advance moral reasoning, improve social skills, and manage angry feelings. Numerous outcome studies of Aggression Replacement Training® with both offending and non-offending male adolescents and with male and female adolescents together have yielded mixed results. The question remains whether or not positive results can be obtained when Aggression Replacement Training® is provided to only female adolescents in a group setting.

This quasi-experimental study examined if there were significant decreases in aggressive tendencies and increases in pro-social behaviors among female juvenile offenders in a residential commitment program in the state of Florida who participated in an Aggression Replacement Training® group intervention versus those who did not participate. Due to the exceptionally high degree of exposure to traumatic life events commonly reported by this population, this study also hoped to ascertain whether or not the level of traumatic distress mattered as to the efficacy of the intervention for the girls who participated.

The results of repeated measures 2 X 2 (time X group) ANOVA tests indicated no significant mean differences in rule-breaking or aggressive behaviors pre- to posttest between

the 30 experimental and 30 comparison group members in this quasi-experimental study, although only a large anticipated effect could have been observed with a sample this size. The degree of trauma (covariate), also, had no significant impact on intervention efficacy for those girls who participated in the Aggression Replacement Training® group treatment. Mean negative behaviors were reduced for all study participants during the 12-week study time frame while in the commitment program, however, and both groups exhibited a mean increase in positive behaviors. Additional studies with larger samples may reveal a clearer picture of the benefits this intervention may provide to girls in juvenile justice commitment settings.

Chapter One

Introduction

According to the Department of Justice, Bureau of Justice Statistics (2011), violent crime rates in the United States have been declining since 1994, reaching their lowest level ever in 2009. Female offenders, however, are not responsible for this downward spiral. In 2008, the percentage of females acting alone who committed a crime of violence was 2.3% higher (19%) than it was in 1995 (16.7%). According to the U.S. Department of Justice (2010), total male arrests declined 22.9% from 2000 to 2009, while total female arrests rose 11.4%--accounting for over one fourth of all arrests in the United States (U.S. Department of Justice, 2011).

The Department of Justice, Bureau of Justice Statistics defines non-lethal crimes of violence as: completed/attempted/threatened violence, rape/sexual assaults, completed/attempted robbery with and without injury, and aggravated/simple assault (2006). Females, especially female juveniles, are now representing a greater proportion of individuals arrested for those crimes. According to Adams and Puzzanchera (2007), the female proportion of all juvenile arrests increased from 20% in 1981 to 29% in 2006. The total violent crime arrests for females under the age of 18 in the U.S. rose from 10,137 in 2002 to 10,411 in 2006, an increase of 2.7% (U.S. Department of Justice, 2007). Canada, too, has been experiencing a steady increase in violent crimes committed by female juveniles. Fitzpatrick (2008) reports that the rate of female teens in Canada who were

charged with a violent crime rose from 60 per 100,000 in 1986 to 132 per 100,000 in 2005.

National arrest statistics for simple and aggravated assaults by female teenagers in the U.S. have been on the rise since 1994, according to Yin (2006). Female juvenile assault arrests rose 12% between 1990 and 2003 (Federal Bureau of Investigation, 2006). Females accounted for 35% of all juvenile assault arrests in 2009 and 45% of all juvenile larceny-theft arrests, compared with 19% and 26%, respectively, in 1981. The percentage of increase in female arrest rates for simple assault far outpaced male rates in the period between 1980 and 2009: 295% versus 100%, respectively (Adams & Puzzanchera, 2007, 2011).

With arrest rates of adolescent girls who commit violent crimes increasing at such an unprecedented rate, juvenile justice professionals need to offer interventions that are effective in reducing violent behavior. Female juvenile offenders are cycling in and out of juvenile justice programs designed to rehabilitate them while their aggressive behaviors continue or even worsen.

In Florida, juvenile violent crime rose steadily between 2002 and 2006: murder/manslaughter referrals increased 70%; attempted murder/manslaughter referrals increased 130%; armed robbery referrals increased 67%; and aggravated assault/battery referrals rose slightly (less than 2%). In 2006, females represented almost 30% (n = 27,303) of the youths referred for delinquency services in Florida, an increase over previous years (Florida Department of Juvenile Justice, 2007). This trend continued throughout fiscal year 2007-08 (Florida Department of Juvenile Justice, n.d.) and was mirrored in other states across the country. Overall referrals for delinquency services in

Florida have steadily declined since fiscal year 2008-09, but females still represent 26% (n = 25,490) of all referrals at the present time (Florida Department of Juvenile Justice, 2012).

Female juvenile offenders exhibit a variety of pro-criminal behaviors, but aggression is becoming a frequently-occurring behavior that both initiates and perpetuates the girls' delinquency status. Aggressive behavior can be defined as overt, offensive acts involving hostility; covert, instrumental acts to obtain a goal; or acts in which the aggressor has multiple motives (Bushman & Anderson, 2001). Hostile aggression involves deliberate physical harm or threat of physical harm; instrumental aggression is an action taken more in the hope of obtaining a privilege, object, or space (Berk, 1999). Girls in Florida who are involved in the juvenile justice system display both instrumental and hostile aggressive tendencies, but nearly three fourths of the girls in Florida's residential commitment programs are physically aggressive (Walker-Fraser, 2007).

The preferred legal response to child and adolescent aggression is punishment, which is more often punitive than corrective and empirically based (Goldstein, Glick, & Gibbs, 1998, pp. 15, 19). In Florida, youths may be formally charged and a recommendation for diversion, probation, or residential commitment made; risk, accountability, and individual needs are considered. If the court orders a recommendation for residential commitment, the youth is assigned a specific restrictiveness level and an appropriate placement is made. Juvenile offenders are committed for an indeterminate length of time—usually somewhere between 3 and 18 months. Many juveniles have been committed to more than one program in their young lives. Placing youths into these

commitment programs protects the public and holds the youth accountable while offering a chance for rehabilitation.

During this time, the Department of Juvenile Justice provides mental health, substance abuse, and sex offender treatment to committed youths who have been identified as needing these services (Florida Department of Juvenile Justice, 2008c). The mental health problems of girls, in particular, who have been committed to residential programs in the state of Florida are high; 94% of the girls have a diagnosed mental health disorder (Walker-Fraser, 2007). A history of physical and sexual abuse is also common to girls in the system, along with the corresponding incidence of Posttraumatic Stress Disorder (PTSD). Sixty-eight percent of female juvenile offenders in Florida have experienced neglect, physical abuse, or sexual abuse (Florida Department of Juvenile Justice, 2008b).

Gaps in Florida's System

Juvenile justice programs in Florida, designed to "increase public safety by reducing juvenile delinquency through effective prevention, intervention and treatment services that strengthen families and turn around the lives of troubled youth," (Florida Department of Juvenile Justice, 2008d, Mission section), are not consistently meeting the gender-specific treatment needs of girls in residential programs (Florida Department of Juvenile Justice, 2008b, p. 33).

In 2004, the Legislature passed and the state adopted a law mandating services for girls in the state's juvenile justice system that are gender specific, but members of the Blueprint Commission discovered that gaps exist within the Florida system. This group of concerned citizens and juvenile justice stakeholders examined Florida's juvenile

justice system and offered recommendations. In July, 2007, Governor Charlie Christ authorized the creation of this Commission in response to key concerns such as repeat juvenile offenders, the overrepresentation of minority youths, and the alarming growth of girls in the juvenile justice population (Florida Department of Juvenile Justice, 2008a). In their report of January, 2008, a recommendation was made that girls involved in the juvenile justice system in Florida receive adequate, gender-specific services delivered by staff trained in gender specific and culturally competent programs (Florida Department of Juvenile Justice, 2008a, p. 33).

The Blueprint Commission (Florida Department of Juvenile Justice, 2008b), Hipwell and Loeber (2006), and Zahn (2007) all report that interventions developed to meet the needs of boys are not necessarily effective with girls. In the past, girls represented a small portion of all youths involved in the system and few studies were conducted. Gaps exist because much of the research on treatment approaches for criminogenic behaviors such as aggression "tends to exclude girls and often does not account for gender differences in results when girls were included" (Kann & Hanna, 2000, p. 273). Successful program completion, along with the likelihood of reduced recidivism, may be greater if the girls are provided with evidence-based services that meet their individual needs. Research has shown that recidivism will not be reduced unless treatment is provided (Cooke & Philip, 2000).

Given that (a) total violent crimes committed by female juveniles are on the rise in Florida, (b) the majority of girls in Florida's commitment programs are physically aggressive, (c) gender-specific treatment needs are not being addressed, and (d) girls in the commitment programs have a higher percentage of mental health and trauma issues

than boys, then evidence-based therapeutic interventions that address aggression and are appropriate for adolescents with mental health and trauma concerns should be implemented in residential commitment programs for girls in the state of Florida. If girls are to be in the care and custody of the state within a facility for 3 to 18 months, then every effort should be made to provide effective services that will help reduce recidivism.

Statement of the Problem

Individualized treatment services that work for girls with aggressive tendencies are needed in residential commitment programs, and research is lacking as to effective programming for this population. A review of relevant literature by Sharkin (1993) revealed that "few significant gender differences with anger seem to exist" (p. 388). More recent studies (Campbell, 2006; Hess & Hagen, 2006; Walcott, Upton, Bolen, & Brown, 2008), however, conclude that females are more likely to engage in instrumental aggression, and males are more likely to engage in hostile aggression. Archer (2004) also indicated that a female bias exists in instrumental aggression among 11-to 17-year olds.

The results of studies among adolescents in Cuba (Sanz Martineza, Schneider, Santa Gonzales, & Del Pilar Soteras De Toro, 2008); in Maine (Anderson, 2006); and in North Carolina (Walcott et al., 2008), however, found no significant gender distinctions in anger expression in this specific population. Walker-Fraser, (2007) additionally reports that 73% of Florida's female juvenile offenders are physically hostile.

Females of all ages may very well aggress in more instrumental than hostile ways, but the display of aggression in nearly three fourths of this population mirrors that of their male counterparts. Boys and girls in commitment programs engage in both hostile and instrumental aggressive acts. Gender, therefore, should not be an issue as far as what

form of aggression needs to be targeted. Gender may be an issue, however, as to treatment needs. Do treatment methods designed to reduce aggressive tendencies in boys work as well for girls?

Aggression Replacement Training®

One promising cognitive-behavioral therapeutic intervention that addresses adolescent aggression is Aggression Replacement Training®. Initially designed as an intervention strategy for adults with mental health problems (Goldstein et al., 1998, p. 49), Aggression Replacement Training® has evolved into a multimodal approach that seeks to change the individual's "thinking, emotion, and action" (Goldstein, Nensén, Daleflod, & Kalt, 2004, p. 6). Aggression Replacement Training® is an attempt to enhance prosocial skills, manage angry feelings, and advance moral reasoning in aggressive youth. "Skillstreaming is its behavioral component, Anger Control Training is its emotion-targeted component, and Moral Reasoning Training is its cognitive component" (Goldstein et al., 1998, p. 1).

Together, the three coordinated components attempt to address the behavioral, cognitive, and emotional aspects that maintain aggressive behavior (Goldstein et al., 1998). This 10-week curriculum has been employed in a variety of settings with antisocial youth of both genders and is currently being offered as an intervention strategy with youth in residential commitment programs in Florida. Outcome studies of Aggression Replacement Training® with both offending and non-offending male adolescents and with male and female adolescents together have yielded varying positive results (Cleare, 2001; Gibbs, Potter, & Goldstein, 1995; Goldstein, Glick, Carthan, & Blancero, 1994; Goldstein, Glick, Irwin, Pask-McCartney, & Rubama, 1989; Goldstein,

Glick, Reiner, Zimmerman, & Coultry, 1987; Gundersen & Svartdal, 2006; Nodarse, 1997; Nugent, Bruley, & Allen, 1999). Prior studies, however, have not been conducted relating to Aggression Replacement Training®'s effectiveness in reducing aggression with strictly female juvenile offenders in a residential program.

Research Questions

The main question to be answered by this study is whether or not Aggression Replacement Training® reduces aggression in adolescent female offenders in a residential setting**.** This residential setting is a secure facility with an alternative public school on the premises; the youths were confined to the grounds—either in, or outside of, the classroom--throughout the study. The particular aggressive behaviors that were examined were the overt, hostile acts that involve physical violence or threat of violence against peers and staff in the program. Other more covert types that may be "problem areas" or "delinquent behaviors" that Achenbach and Rescorla (2001) report are often highly correlated with physically aggressive acts were also taken into consideration. These are the types of behaviors that conflict with social mores and may co-occur with, or be pre-cursors to, hostile aggression. These acts, referred to as "rule-breaking behavior" by Achenbach and Rescorla, are commonly exhibited by females and were included in the analysis in order to examine the full spectrum of antisocial conduct. Aggression Replacement Training® attempts to address the "thinking errors" that result in these delinquent acts in the "Moral Reasoning" component of the intervention. Whether considered separately or as a single syndrome with variable expression (Burke, Loeber, & Birmaher, 2002), all aggression-related behaviors that initiate and perpetuate the girls' delinquency status, both in—and outside of—the classroom, were included.

The underpinnings of what is now called Aggression Replacement Training® began in the early 1970's as an intervention designed for skill-deficient adults with psychiatric disorders who had been deinstitutionalized and discharged to communities. Since that time, the intervention has been initiated and applied in a large number of schools, agencies, and institutions, and a fair amount of evaluation research has been conducted and reported involving a variety of populations (Goldstein, et al., 1998). A reasonable assumption would thus be that the girls' high percentage of mental health problems per se would not be a major factor, as relating to the efficacy of the intervention.

The fact that adolescent female offenders have also been found to experience exceptionally high rates of traumatic stress, and that traumatized individuals keep reliving the "thoughts, feelings, actions, or images" (van der Kolk, McFarlane, & van der Hart, 1996, p. 419) of the prior traumatic event in the present time may, however, pose a responsivity problem. A secondary question being considered is the role that trauma might play as relating to the difference in overall aggressive behaviors between the participating and non-participating youths.

The main research question consists of 3 separate components so that the full spectrum of aggressive behavior from two separate sources, both in--and outside of—the classroom, is captured:

a. Is there a difference in *aggressive behavior in the classroom* between those youths who participate in the Aggression Replacement Training® intervention and those who do not from pre-intervention to post-intervention?

b. Is there a difference in *rule-breaking behavior in the classroom* between those youths who participate in the Aggression Replacement Training® intervention and those who do not from pre-intervention to post-intervention?

c. Is there a difference in *aggressive behavior outside of the classroom* between those youths who participate in the Aggression Replacement Training® intervention and those who do not from pre-intervention to post-intervention?

The second research question asks if traumatic distress may make a difference in overall aggressive behaviors between the participating and non-participating youths:

a. Is there a mean difference in *aggressive behavior in the classroom* between those youths who participate in the intervention and those who do not from

b. pre-intervention to post-intervention, *after controlling for the degree of traumatic distress*?

c. Is there a mean difference in *rule-breaking behavior in the classroom* between those youths who participate in the intervention and those who do not from pre-intervention to post-intervention, *after controlling for the degree of traumatic distress*?

d. Is there a mean difference in *aggressive behavior outside of the classroom* between those youths who participate in the intervention and those who do not from pre-intervention to post-intervention, *after controlling for the degree of traumatic distress*?

Once the concomitant variable of traumatic distress is partialed out and the determination made as to what proportion of the variance in aggressive behavior might be explained by trauma, the third question posed in this study is considered.

Research question three asks whether or not a difference in outcomes exists by degree of traumatic distress for those participants who received Aggression Replacement Training®:

a. Does the degree of posttraumatic distress moderate the effect of Aggression Replacement Training® on *aggressive behavior in the classroom* from pre-intervention to post-intervention for those participants who receive the intervention?

b. Does the degree of posttraumatic distress moderate the effect of Aggression Replacement Training® on *rule-breaking behavior in the classroom* from pre-intervention to post-intervention for those participants who receive the intervention?

c. Does the degree of posttraumatic distress moderate the effect of Aggression Replacement Training® on *out-of-classroom aggressive behavior* from pre-intervention to post-intervention for those participants who receive the intervention?

Study Significance

The purpose of this study is to ascertain the efficacy of Aggression Replacement Training® with adolescent female offenders in a residential setting. Gender-specific, effective interventions that address the criminogenic needs of minor children in state custody are necessary in order to help prevent recidivism and protect the public. Targeted, effective interventions should positively impact the offenders while in custody and in their home communities after discharge. Whether or not aggressive tendencies can be reduced in this population by participation in this training, and whether or not the

degree of posttraumatic distress impedes the learning process--thereby decreasing potential gains the training may provide--are questions that needed to be answered for all involved in serving these youths. The youths, the families, the communities, the juvenile justice systems, educators, clinicians, and researchers throughout the U.S. and the world may all benefit by the knowledge gleaned.

Chapter Two

Literature Review

In attempting to ascertain whether or not a particular behavior exhibited by a particular population might change as a result of a particular intervention, all of the particulars must first be sorted and examined. The origin, forms, and functions of aggressive behavior will first be explored. The empirical literature relating to Aggression Replacement Training® will then be evaluated in order to clarify the actual benefits to prior participants. Finally, the role of gender will be considered and whether or not gender--and the macro forces that influence female delinquency—might be a relevant variable as relating to the efficacy of the Aggression Replacement Training® intervention.

Review of Related Aggression Literature

Aggression Subtypes

The particular behavior being targeted in this study is aggression. The general consensus among researchers is that aggression is a behavioral means of managing a perceived need or expressing a feeling. Instrumental aggression is often referred to as "proactive," "covert," "indirect," or "social" in the literature; the implication being that instrumental aggression is a prearranged and non-physical aggressive act taken in order to satisfy a perceived need. Hostile aggression is often referred to as "reactive," "overt," or "physical" in nature and implies direct harm or threat of harm. Hostile aggression is an

impulsive response to a feeling—usually anger, fear, or frustration. This is not to imply that instrumental aggression cannot be a response to provocation, or that hostile aggression cannot be prearranged; the aforementioned are just the more common forms and functions. Gorkin (2000) defines aggression in general as either a purposeful or a spontaneous expression of an emotion in a dysfunctional, destructive way.

Purposeful aggression, however, is calculated aggression. Berk (1999) reports that this type of aggression is an action taken in the hope of obtaining a privilege, object, or space. If the function of the behavior is to obtain something desired in a manner that is not apt to harm the aggressor, can we call instrumental aggression dysfunctional? Instrumental aggression is a destructive act that causes non-physical harm only to the targeted individual; the aggressor remains safely out of harm's way. If an individual manages a perceived need in a way that causes harm only to another--while hopefully obtaining the privilege, object, or space desired--is this not functional? The dysfunction exists only in that instrumental aggression is not socially appropriate. A need is met by indirectly harming another person, but who is to know? An adolescent who may not have reached the conventional stage of moral development may not really care about the harm caused to another individual.

Spontaneous aggression is unplanned aggression. This type of aggression is usually a reaction to a feeling; the aggressor is angry, fearful, or frustrated and lashes out physically. This type of hostile aggression is a destructive act in which the perpetrator threatens, or actually causes, physical harm to the targeted individual. The aggressor "acts out" and hurts another individual. The function is to discharge negative feelings. Hostile aggression also violates social norms. Negative feelings are released by directly

harming, or threatening to harm, another person. The problem lies in that others will know. Social status can also be jeopardized, and penalties may be imposed.

Benefits of Adolescent Aggression

Both subtypes of aggression involve fulfillment of a human need and both are socially inappropriate, but only hostile aggression potentially damages social status. In the case of adolescents, social sanctions in the form of criminal charges, school suspension or expulsion, and/or negative adult and peer evaluation may result. Social rank may also rise, however, due to the performance of hostile acts. Juveniles may perceive a physically aggressive peer as "cool" or "tough;" the aggressive adolescent may actually benefit socially from acting out. Gaining social status with one's peers may be perceived by a hostile adolescent to be more valuable than the threat of legal charges and penalties, disruption in education, or negative evaluation by family or other individuals.

Walcott et al. (2008) studied the associations between peer-perceived status and aggression in seventh grade students and found that highly popular students were elevated in all types of aggression, but aggressive students were not usually considered "likeable" by their peers. The results of this study indicate that both male and female young adolescents use aggression to gain social status, but their aggressive acts do not necessarily help them make more friends. The authors additionally discovered that the instrumental aggression that young adolescent females exhibited predicted later popularity. Youths may also use aggressive strategies to gain and maintain social dominance within their peer culture, according to Pellegrini and Bartini (2001). Social dominance may serve to provide youths with a greater sense of safety, and the peers who

align with popular, aggressive students may very well do so because of the "safety net" those students provide.

Theoretical and Practice Literature Regarding Aggression

Once considered an innate urge or drive, aggression was regarded as conduct over which an individual had little control. Assisting offender populations in managing hostile behaviors was deemed useless because "nothing works" (Martinson, 1974). Violent offenders were—and still are--controlled via incarceration in order to protect the public from individuals whose "genetic makeup" was responsible for their actions. The general consensus among researchers today is that aggression is not an innate drive, and some things will work in curbing aggressive tendencies. "What works?" is the current buzzword and question under investigation.

If nature is not responsible for aggressive tendencies, then the social environment must determine the who, what, when, where, and why individuals reactively or proactively engage in both instrumental and hostile aggression. Managing societal forces via coercive processes, according to Mattaini and McGuire (2006), "appears to be deeply integrated into the U.S. culture" (p. 186).

Aggression and Adaptation

Evolutionary theorists argue that functional advantages of human beings are preserved through (Darwin's) natural selection. Individuals who possess certain "superior" attributes thrive and reproduce; less fortunate individuals are winnowed out. The genetic traits of the more fortunate individuals are passed on to subsequent generations, and these individuals become more and more successful in competing for resources necessary for survival. Aggression, as viewed by these theorists, would be

considered an adaptive strategy. Those who aggress do so in order to achieve and maintain dominance in a population, increasing the likelihood of survival.

Aggression and Development

Developmental theorists maintain that hostile aggression in children generally declines after the third year of life. High levels of aggressive behavior are commonplace in children aged 17 to 42 months. After age 3, children normally exhibit low levels of aggressive behaviors, or none at all (Tremblay & Nagin, 2005). Children whose aggression does not decline usually remain aggressive into young adulthood. These children may possess low verbal intelligence and deficits in executive cognitive functioning, according to Vitaro, Brendgen, and Barker (2006).

Once aggression wanes, there is no evidence to suggest that the behavior re-emerges in preadolescence or adolescence (Vitaro et al., 2006). If maturation brings forth a decline in aggressive behavior, Vitaro et al. surmise, then children do not learn *to be* aggressive; they learn *not to be* aggressive. Brain maturation and socialization facilitate proper conduct. If aggressive tendencies do re-emerge, then the social environment is responsible for reviving these dormant behaviors. The authors also propose that aggressive behavior may not necessarily decline at all over the course of development; aggressive behavior may simply change to a more socially accepted form that can be just as damaging to the target with much less risk of retribution.

Social Learning Theory

Bandura's (1977) social learning theory emphasizes the importance of observing and modeling behaviors, attitudes, and emotional reactions. An individual must possess the ability to attend to, retain, and reproduce what is observed, and the individual must

also anticipate a positive outcome before modeling the learned behavior. If a behavior is positively reinforced, replication is likely. Aggression, according to Goldstein et al. (1998), is primarily a learned behavior. It is "learned by observation, imitation, direct experience, and rehearsal" (p. 3). Aggression is "taught early, often, and well" and is "supported and encouraged by important others" in the social environment (p. 8).

Social learning theory bridges the behaviorist and cognitive learning theories. Cognitive-behavioral therapeutic approaches assist clients in identifying irrational thoughts, beliefs, or assumptions that lead to ineffective or dysfunctional behaviors and replacing them with more suitable alternatives. These therapies are directive and educational, rather than therapeutic. They are "structured, goal-oriented approaches that focus on values enhancement and skill development through the use of modeling and reinforcement techniques" (Hubbard & Matthews, 2008, p. 237). Cognitive-behavioral approaches are the most effective intervention for criminal offenders, according to meta-analyses conducted by Dowden and Andrews (1999) and Wilson, Bouffard, and MacKenzie (2005). The most powerful treatment approaches, according to Dowden and Andrews, are those that use concrete social learning and behavioral strategies. These strategies are designed to change criminal thinking and behavior while providing the offender with problem solving and social skills (RKC Group, 2008). Multidemensional Treatment Foster Care--a community-based intervention for adolescents with severe and chronic delinquency and their families--and Seeking Safety--a treatment strategy designed for male and female clients aged 13 to 55 with a history of trauma and substance abuse--are currently the only cognitive-behavioral interventions listed in the National Registry of Evidence-based Programs and Practices (NREPP), a service

provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), as evidence-based interventions that are appropriate for female adolescents in residential settings (NREPP, n.d.). Aggression Replacement Training® is a multimodal cognitive-behavioral treatment technique that addresses an individual's thinking, emotion, and action and has been shown to be effective at reducing aggressive behaviors with offenders and non-offenders in a variety of settings. Vitaro, Brendgen, and Barker (2006) recommend interventions of this type for aggressive adolescents. Aggression Replacement Training®, therefore, could be something that works for aggressive girls who are involved in juvenile justice systems.

Review of Related Aggression Replacement Training® Literature

Early Studies

The second particular to be examined is that of the Aggression Replacement Training® intervention itself. The earliest evaluation studies (Goldstein et al., 1987; Goldstein et al., 1989) indicated that Aggression Replacement Training® was effective in increasing adolescent prosocial skills, decreasing acting-out/impulsive behaviors in all but one study, and decreasing recidivism in the one study that measured rate of recidivism. These studies, however, involved only male participants.

The first quasi-experimental study conducted by Goldstein et al. (1987) compared 24 youths at a limited-security institution who received the 10-week Aggression Replacement Training® program, 24 youths who were assigned to a brief-instruction control group, and 12 youths who received neither Aggression Replacement Training® nor brief instruction. The Aggression Replacement Training® group acquired and

transferred 4 out of 10 Skillstreaming skills, and the number and intensity of acting-out behaviors were reduced. No significant differences were found for either control group.

A second study (Goldstein et al., 1987) was conducted at a maximum security facility for juvenile delinquents in 1987. This study sought to replicate the first, only with youth whose offenses were more serious. Fifty-one youths participated, and Skillstreaming skills were again acquired and transferred. Contrary to the study at the limited-security facility, data yielded significant results for Aggression Replacement Training® program participants in moral reasoning, but not in acting-out behaviors.

The third early study by Goldstein et al. (1989) involved youth and family members in the community. Aggression Replacement Training® for adolescents, Aggression Replacement Training® for adolescents and family members, and a no-treatment control group were included in this randomized study. Skill levels significantly increased and anger levels decreased in mild anger-provoking situations, but not severe anger-provoking situations, for both treatment groups. Recidivism rates also significantly declined for both groups. No changes were noted in the control group.

Another early experimental study (Goldstein et al., 1994) compared gang members who went through a 4-month Aggression Replacement Training® program with gang members who did not. Fifty-two percent of the control group members were re-arrested, whereas only 13% of the Aggression Replacement Training® gang members were re-arrested (chi-square = 6.08, $p < .01$). None of the ANOVA comparisons of the Aggression Replacement Training® scores of the treatment and control group yielded significant differences in anger control, however. Lower recidivism rates for

experimental group members (15%) versus control group members (40%) were also found in a study by Gibbs et al., (1995) involving juveniles in a medium security facility.

Later Studies

The following subsequent studies conducted by researchers other than those who developed the intervention have included females. None of these studies were conducted in a residential setting, however, and only one controlled for gender.

An experimental study of Aggression Replacement Training® by Nodarse (1997) involving 25 emotionally handicapped adolescents (24 were male) in a school setting indicated that participation significantly reduced aggression and increased socially appropriate behaviors during and immediately after the training. A significant difference was found between the treatment group and control group on the number of aggressions reported on a daily basis by the students, $F(45, 585) = 1.81$, $p < 001$. Significant decreases in aggressive behaviors, $F(1, 47) = 4.87$, $p < .03$, and increases in socially appropriate behaviors, $F(1, 47) = 9.7$, $p < .003$, for the treatment group were also found using a two-way ANOVA on the teacher's ratings. Effect size was not reported.

Nugent et al., 1999, conducted a field trial of the effects of a condensed version of Aggression Replacement Training® without the moral reasoning component on the antisocial behaviors of 522 female and male adolescents in a runaway shelter. The age range of these adolescents was 11 to 17; 54% were female. Antisocial behaviors were significantly reduced in both genders. A regression approach to time series analysis indicated that the mean weekly number of male antisocial behavior incidents decreased by 14%; the mean weekly number of female antisocial behavior incidents decreased by 29.4%. A comparison group was not utilized in this study.

A qualitative study by Leenaars (2005) in the Netherlands compared the differences between females (half of whom had been physically or sexually abused during childhood) and males aged 14 to 25 who were all violent psychiatric outpatients with an I.Q. of at least 80 and who had all been arrested for physical aggression. No significant differences between females and males in an adapted version of Aggression Replacement Training® were found relating to anger, hostility, types of aggressive behavior, or social skills performance. Females in the study (n = 12), however, experienced more mood problems, impulsivity, and emotional instability than males. These problem areas may be associated with traumatic experiences, the author surmises, and "focused interventions that directly deal with the histories of traumatic victimization" (p. 454) should positively impact these participants.

Five males and nine females aged between 14 and 20 years and 24 males and one female aged between 7 and 12 years participated in a study of the effectiveness of Aggression Replacement Training® delivered during school hours in Norway (Moynahan & Stromgren, 2005). Seven adolescents and 15 children formed the intervention group. Social skills and problem behavior domains utilizing the Social Skills Rating System (Gresham & Elliot, 1990) at pre- and posttest were measured for the treatment and control groups and for both age groups using the Wilcoxon Signed-Rank test for analysis of differences within the intervention and control groups and Mann-Whitney tests for analysis of differences between the intervention and control groups. Results indicated no changes in either social skills or problem behaviors for both the adolescent treatment and control groups from pre- to posttest, and changes in the social skills and problem behaviors for the children's treatment group only from pre- to

posttest. Effect size was not reported, and the children's treatment group was composed of at most one female.

Gundersen and Svartdal (2006) also conducted an outcome study of the effects of a 24-hour Aggression Replacement Training® on 65 children (49 of whom were boys) aged 11 to 17 years with "varying degrees of behavioural problems" (p. 63) in Norway. General Linear Model was used to compare differences in scores on individual instruments between pre- and posttests; the children's social skills improved and their behavioral problems decreased. The Aggression Replacement Training® group demonstrated significant improvement in 9 out of 10 tests; the comparison group demonstrated improvement in 2 out of 10 tests. Effect size was not reported.

Aggression Replacement Training® with Only Female Participants

Two published studies of Aggression Replacement Training® effectiveness involving only female adolescent participants in residential settings have been conducted; one quantitative and one qualitative. Aggressive behaviors were not measured in the qualitative study, and results from the quantitative study indicated that aggressive behaviors were not reduced.

A qualitative study by Bray (2006) addressed the extent to which Aggression Replacement Training® met the needs of 11 female juvenile offenders from two institutional sites in the United States. This study was a time-limited qualitative case study of juvenile female offenders receiving the same intervention at two sites. This method was selected in order to provide an in-depth understanding of the impact of a cognitive-behavioral curriculum from the perspective of the trainees and trainers. Participants reported that they "needed and benefited from the Skillstreaming lessons.

They wrestled with anger control. They encountered the moral dilemmas. Aggression Replacement Training® addressed these needs" (p. 203). Bray additionally reported, as did Leenaars in the qualitative study mentioned previously, that Aggression Replacement Training® does not address all of the gender-specific needs of female offenders, and "victimization and trauma could best be better addressed in a different venue" (p. 203).

Cleare (2001) conducted a quasi-experimental study of the effectiveness of Aggression Replacement Training® using all three components with a small convenience sample (n = 27) of mild to moderately retarded pre-adolescent and adolescent females who were enrolled in a residential program for five to six years. Analysis of several mixed design ANOVA's revealed that no significant differences in aggression occurred as a result of Aggression Replacement Training® using the Achenbach Child Behavior Checklist, Teacher Report Form for Ages 6-18 measure, and that positive behaviors significantly increased using the Behavior Incident Report measure, but negative behaviors did not decline.

Although results vary across time and place, the results from prior studies do generally indicate that this particular intervention is effective for many adolescent offenders. No gender differences in reduced aggression as a result of Aggression Replacement Training® were found in the one qualitative (Leenaars, 2005) and one quantitative study (Nugent, et al., 1999) that compared gender. Neither of these studies indicated whether or not youths were separated by gender when the training was implemented, however. Results of the one study (Cleare, 2001) involving only females indicated that aggressive behaviors did not decline. Is it possible that the Aggression Replacement Training® intervention may be less effective for females if males are not

present, or might the literature reveal other unknown variables that may moderate the effect of the intervention for female participants?

Review of Literature Involving Aggression and Delinquency as Relating to Gender

The particular population targeted for this study was composed of female teenagers with aggressive tendencies and criminal behaviors who were committed to a juvenile justice residential commitment program. The final particular to be considered is that of gender and what influence, if any, gender may have as to the efficaciousness of the Aggression Replacement Training® intervention.

Gender Differences in the Literature

Girls have been largely ignored in aggression research and practice literature. Some authors mention gender in passing, or report that males and females do not differ significantly as to the form or function of aggressive behavior (Anderson, 2006; Sanz Martineza, et al., 2008; Sharkin, 1993; Walcott et al., 2008). Others (Campbell, 2006; Hess & Hagen, 2006) conclude that females are more likely to engage in instrumental aggression, and males are more likely to engage in hostile aggression. Campbell additionally concluded in a meta-analysis of sex differences relating to hostile aggression that, beginning in infancy, females exhibit more fear than males; and "the magnitude of the sex difference increases with the increasingly dangerous nature of the behavior" (p. 238). The results of a meta-analysis of instrumental aggression by Archer (2004) indicated that a female bias in instrumental aggression is greatest among 11-to 17-year olds; a male bias in hostile aggression is greatest among 18-to 30-year olds.

Even though this particular population may not exhibit a female bias in instrumental aggression, the results of this study and others whose results indicate that adolescent females are less hostile would support evolutionary theories whereby males would be in competition for females of childbearing age who would be less inclined to engage in violent behaviors.

Other gender differences relating to aggression and criminality have been noted in the literature. Raaijmakers, Engels, and Van Hoof (2005) studied the relationship between moral reasoning and delinquency in adolescence and young adulthood. No gender differences in moral reasoning were found between delinquent male and female adolescents, who were assumed to be in stage two (individualistic and instrumental) moral reasoning development. Significant differences between boys and girls, however, were found in delinquency; boys scored substantially higher than girls, $F(1,844) = 104.48$, $p < .001$, $\eta^2 = .11$. Delinquency was defined as publicly prohibited actions taken against victims that serve no higher social goal.

Female offenders also report being the victim of sexual abuse more often and of longer duration than their male counterparts, according to a study of childhood adverse events and traumatic distress of male and female prisoners conducted by Messina, Grella, Burdon, and Prendergast (2007). The results of a study conducted by Dixon, Howie, and Starling (2005) in Sydney, Australia, also indicated that 70% of the female juvenile offenders with a posttraumatic stress disorder (PTSD) diagnosis in a detention center had experienced sexual abuse.

Bloom, Owen, and Covington (2003) report that female offenders engage in self-injurious behavior and abuse illegal substances more often than male offenders. They

also found that female offenders are more depressed and more anxious than their male counterparts. Covington (2001) states that gender differences exist in the behavioral manifestations of mental illness. Men are more likely to turn their anger outward by being physically and sexually threatening and assaultive; women are more likely to turn it inward by being depressed, self-abusive, and suicidal. Benda (2005) reports that stress, depression, fearfulness, and suicidal ideation/gestures are strong predictors of women's—although not men's--recidivism.

The gender differences noted in the review indicated that females are less inclined than males to engage in delinquent behavior; when they do, they can be as physically violent as their male counterparts. Female offenders also experience more sexual abuse; abuse illegal substances more often; and internalize angry feelings by being more fearful, depressed, anxious, and suicidal than males. These mental health concerns are significantly associated with female recidivism rates. Will any of this data gathered inductively support the prevailing theories relating to female offenders?

Theoretical Perspectives Relating to Women's Criminal Behavior

Bloom et al. (2003) have identified three overriding theoretical perspectives relating to women's criminal behavior: the pathways perspective, relational theory, and trauma theory. The life experiences of women involved in corrections form the basis of these perspectives which assist in establishing appropriate practice guidelines. Each perspective is considered as to the relative contribution it may make to the knowledge base of what may work for aggressive girls in juvenile justice commitment programs.

The Pathways Perspective

Sydney (2005) reports that women commit crimes for different reasons than men.

Their pathways into crime are often influenced by their partners or other significant people in their lives, substance abuse, economic hardship, mental illness, or history of abuse. Survival and coping often lead them down the road to illegal activities. Women's strong need for association with others often connects them with people who exploit or abuse them. The crimes they commit—such as prostitution, drug-related offenses, and property crimes—are often attempts to escape abuse. Girls and women may need to break valuable connections in the home or community in order to escape abuse, and then social and financial resources are not available to start anew. They are forced to connect with and trust whoever is available. The new connections they make may be with individuals who take advantage of their vulnerable condition and exploit, abuse, or involve them in criminal activities. Women may abuse substances to cope, or they may have untreated mental health needs and self-medicate. They may neglect themselves in favor of the substances they use, or in favor of those individuals whom they have connected with. They may then need to break the new connections, engage in criminal activity in order to survive, and may then reconnect with others who take advantage of their current situation. This cycle often continues until the women are arrested. According to Sydney, traditional delinquency theories do not take into account these "gendered pathways" that assist in creating and sustaining female criminality. "Many women on the social and economic margins struggle to survive outside legitimate enterprises, which brings them into contact with the criminal justice system" (Covington, 2001, p. 2).Violent behavior can often be the choice of women whose "deep and chronic" social disadvantage offers few other survival options (Rumgay, 1999, p. 119).

Relational Theory

The route to maturity is also different for men and women, according to relational theory. Men seek independence and self-sufficiency; women seek connectedness. "Forming and keeping relationships are fundamental elements in women's lives" (Sydney, 2005, p. 8). Mutually trusting and empathetic relationships and a strong desire for affiliation and acceptance are important to females (Hubbard & Matthews, 2008). Close associations with partners, peers, children, family, and friends are necessary in a woman's environment in order to foster psychological growth (Covington, 2001). This need for connectedness influences every aspect of their lives, establishing their identities and feelings of self-worth and empowerment. Relational violations and disconnections are responsible for psychological problems that can lead women down that gendered path to criminality (Covington, 2001), as well as inhibit them from successfully adjusting to an institutional environment. Maintaining these connections with important others while incarcerated may assist in women's adjustment; whereas limited support may make adjustment more difficult and lead to problem behaviors (Wright, Salisbury, & Van Voorhis, 2007).

Understanding how relational theory is linked to female criminal behavior is important, according to Covington, so that therapeutic services in correctional settings do not re-victimize women by disregarding their need for connectedness or by inadvertently re-creating the same types of violating relationships they may have been subjected to in the past.

Trauma Theory

Victimization and other traumatic experiences are recurring themes in the lives of female offenders. Estimates of the number of delinquent girls in the U.S. who report being a victim of physical or sexual abuse vary widely; some report rates as high as 75% (Browne, Miller, & Maguin, 1999). Adolescent female offenders are also much more likely than male offenders to be direct victims of violence; Cauffman, Feldman, Waterman, and Steiner (1998) discovered that female juvenile offenders were 3.4 times more likely than male offenders to have been a victim of rape/molestation or physical assault/attack. Islam-Zwart and Vik (2004) found that women who were sexually abused as children felt more anger toward others than women who were not sexually abused, and Wright et al. (2007) report that women who have been abused as children are "acutely sensitive" to the traumatizing aspects of prison life.

Trauma theory posits that traumatic distress may profoundly impact a woman's well being. Traumatic experiences can alter a person's psychological, biological, and social equilibrium; the memory of one particular event can taint all other experiences, spoiling appreciation of the present (van der Kolk, et al., 1996, p. 4). Trauma survivors "carry memories of which no one else will speak, fragments of those other worlds in which they have traveled and those multiple selves they invented in order to endure and survive" (Gilfus, 1999, p. 1247). Covington (2001) adds that the "traumatization of women is not limited to interpersonal violence. It also includes the witnessing of violence, as well as the stigmatization that can occur because of gender, race, poverty, incarceration, and /or sexual orientation" (p. 9).

A PTSD diagnosis does not adequately encompass the insidious trauma created by societal forces or the "compounding effects of multiple sources of injury" (Gilfus, 1999, p. 1243). Repeated traumatization in childhood has pervasive effects on the development of the mind and brain and interferes with one's ability to integrate sensory, emotional, and cognitive information (van der Kolk, n.d.). PTSD does not "capture the multiplicity of exposures over critical developmental periods" (van der Kolk, n.d., p. 9).

Childhood trauma, according to van der Kolk, (n.d.), usually begins at home and is probably the nation's most important public health challenge. The term "complex trauma" has been developed by experts in the field such as B. A. van der Kolk, J. Briere, and J. Spinazzola to describe the problem of children's exposure to multiple/chronic, adverse interpersonal traumatic events through the child's caregiving system. Abuse and neglect in childhood, according to Cook, Blaustein, Spinazzola, and van der Kolk of the National Child Traumatic Stress Network Complex Trauma Task Force (2003), often leads to subsequent trauma exposure, such as physical and sexual abuse and community violence. Adults with histories of childhood physical abuse and neglect, according to van der Kolk (n.d.), have very high arrest rates for violent crimes.

Arrest rates of adolescent females are climbing, and nearly three fourths of these offenders have experienced neglect, physical abuse, or sexual abuse in their young lives (Browne, et al., 1999). It would be difficult to ascertain the degree of exposure, but being aware of prior victimization is important; trauma may undermine potential treatment gains (Hubbard & Matthews, 2008). Understanding the role that trauma and violence play and appropriately addressing the associated issues of the female offender/survivor will

increase the likelihood of a successful outcome (Bloom et al., 2003). The prognosis for youthful offenders with a trauma diagnosis, according to O'Donnell and Lurigio (2008), is poor. Wright et al. (2007) recommend trauma-informed protocols and services for female offenders. These services can be strengths-based and individualized interventions that recognize female offenders' experiences and utilize existing survival skills. "Both trauma theory and the relational model," according to Hubbard and Matthews (2008), "emphasize the importance of a collaborative approach that gives girls a voice in all phases of service delivery" (p. 239).

Does Gender Influence What Works?

The importance of relationships and victimization and the forces that lead females down the criminal pathway are evident in the results of the studies reviewed. Female offenders exhibit more self-debasing behaviors, experience more abuse, are more fearful, have more mental health concerns, and abuse substances more often. The data suggests that women offenders could arguably be viewed as victims who survive and cope without sacrificing important others. The pattern in the data does seem to fit the theoretical perspectives presented.

Do the reasons why girls get into trouble matter as to how girls can learn to stay out of trouble? According to Andrews, Bonta, and Hoge (1990), Dowden and Andrews (1999), and Koons, Burrow, Morash, and Bynum (1997), effective intervention involves only the consideration of risk, need, and responsivity. The risk principle states that "the amount of intervention that an offender receives must be matched to his or her risk level to reoffend" (Dowden & Andrews, p. 439). The need principle is concerned with the promising risk factors ("criminogenic needs") which must be emphasized and targeted.

Criminogenic needs are the risk factors that are amenable to change and that research has shown are linked to criminal conduct. Responsivity is concerned with how the styles and modes of service used match the characteristics and learning styles of the offenders (Dowden & Andrews, p. 440).

"What works" literature consists of quantitative reviews of studies of effective interventions that reduce recidivism in offenders and adhere to these principles. The results of a study conducted by Koons et al. (1997) indicate that intensive targeting of multiple criminogenic needs of high risk offenders with valid instruments significantly reduces recidivism. Dowden and Andrews (1999) examined the principles of effective intervention for female offenders through a meta-analytic review and concluded that "stronger treatment effects were revealed in programs that targeted higher risk cases ($\eta = .31$), predominantly focused upon criminogenic versus noncriminogenic needs ($\eta = .49$), and also used behavioral-social learning versus nonbehavioral treatment strategies ($\eta = .38$)" (p. 445).

"What works" treatment--based on social learning, social bond, and general strain theories--places the problem of crime within the individual, a micro-level focus, and addresses individual responses to sociological forces. Gender-responsive treatment proponents argue that this focus blames and pathologizes the offender and ignores the role of macro-level forces that create and sustain female criminal behavior. These forces marginalize girls and create an environment where they are apt to get involved in destructive behaviors. Gender-responsive literature adds clarity to the responsivity principle as it applies to girls who need qualitatively different types of programs and services (Hubbard & Matthews, 2008). "The similarity of major risk factors for boys and

girls," these authors add, "are overly simplistic and impede the development of differentiated treatment that adequately addresses the needs of girls" (p. 245).

Gender-responsive literature, according to Hubbard and Matthews (2008), explains the increase in female delinquency, identifies the underlying causes of delinquency, is concerned with the sexist and paternalistic responses of the juvenile justice system, and supports girls. Girls, gender-responsive proponents argue, are more high need than high risk, and are not in need of the types of controls applied to boys. Girls represent more risk to themselves than to others; they are a low risk to public safety and do not need to be locked up. This only exacerbates the very problems that generated delinquent behaviors in the first place.

Hubbard and Matthews (2008) additionally advocate for the promotion of "healthy connections" for girls. Covington (2001) agrees, and states that "the criminal justice system is designed in such a way as to discourage women from coming together, trusting, speaking about personal issues, or forming bonds of relationship" (p. 12) so necessary for psychological well being.

Hubbard and Matthews (2008) admit, however, that changing the way girls interpret and respond to their environment is far more likely than changing the environment itself. The targeted, cognitive-behavioral "what works" approaches could "be modified to conform to girls' need for greater support, safety, and intimacy" (p. 249). Programs that focus more on girls' general needs, rather than criminogenic needs, "may empower girls and improve their overall quality of life, but they are not likely to reduce recidivism" (p. 245).

How much do the prior experiences and needs of girls matter as related to a cognitive-behavioral intervention designed to address aggressive tendencies? Does the level of traumatic distress brought about by these prior experiences impact the efficacy of the Aggression Replacement Training® intervention? Do any of the micro- or macro-level forces that impact girls and that may contribute to their delinquency need to be taken into consideration when delivering a cognitive-behavioral intervention whose micro-level theoretical framework is based on an offender's risk to reoffend? This study hopes to help answer whether or not being female--and suffering from events more commonly experienced by females--matters, as relating to the efficacy of one cognitive-behavioral intervention that reportedly works for girls.

The results of this review affirm the need for additional studies of the efficacy of Aggression Replacement Training® with this population. The assessments used to measure aggression in this study--Achenbach's Child Behavior Checklist, Teacher's Report Form for Ages 6-18 and the Behavior Incident Report--replicate those used by Cleare in 2001, the only other quantitative study of Aggression Replacement Training® with adolescent girls in a residential setting. What remains to be learned is whether or not Aggression Replacement Training® is effective in reducing aggressive behaviors for 13- to 18-year-old girls in a juvenile justice commitment program in Florida and what role traumatic distress might play.

Chapter Three

Methods

Participants

One hundred eighty female juvenile offenders who were committed to a juvenile justice residential commitment program in the state of Florida composed the sampling frame for this study. The sample was composed of 60 randomly sampled youths, 30 experimental group members and 30 comparison group members.

Seventy youths, ranging in age from 15 to 18 years (mean age of 16.85 years), initially agreed to participate. Two voluntarily withdrew soon after the group started, three were discharged from the program earlier than anticipated, and five participants' written consent forms were not returned. These five participants were assessed and attended all 30 group sessions; their assessment scores were not included in the final analyses. Comparison group members were offered the option to participate in the intervention after the completion of posttest assessments; none opted to do so. Both comparison and experimental group members were offered the option to opt out prior to the beginning of group treatment or at any time during the study. No participants opted out prior to the beginning of group treatment.

Study Design

Thirty experimental and 30 comparison group participants who were committed to a residential program were tested using an experimental comparative change design.

Data collection was complete when the data from 60 youths, 30 experimental group members and 30 comparison group members, had been collected and combined into one data set. The data collected from all 60 youths in both groups were used to answer the research questions relating to both aggressive behaviors and traumatic distress.

Approach and Design Rationale

A two-group, randomized pretest-posttest design was to be utilized by the researcher to examine mean changes in behaviors and the effect of traumatic distress on aggressive behavior outcomes from pretest to posttest. Teacher ratings of in-classroom behavior and program specialist ratings of out-of-classroom behavior were analyzed separately in order to offer an all-inclusive representation of participant conduct.

This design was chosen due to the considerable time needed for one trainer to provide a 10-week long intervention to a maximum of 10 participants at one time in one facility that houses a maximum of 30 residents. At the time of the study, there were only 14 residential commitment programs for girls in Florida, and Aggression Replacement Training® was not offered at all, or not being offered on a regular basis, in these facilities. The main research question asks whether or not the Aggression Replacement Training® intervention is effective for girls, not whether the intervention is more effective for boys than for girls, so a comparison group composed of boys who are committed to another program would not have been useful. Comparing girls from different sites would have interfered with the fidelity of the study as well, because programmatic services differ depending upon a variety of factors.

Instruments

UCLA PTSD Index for DSM-IV (Adolescent Version)©

The University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index (UCLA PTSD Index for DSM-IV [Adolescent Version]©) is a revision of the widely used and researched Child PTSD Reaction Index: CPTS-RI (Pynoos, Frederick, Nader, Arroyo, Steinberg, Eth, Nunez, Fairbanks, 1987). The CPTS-RI was designed to assess the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (*DSM-III*) PTSD criteria, and the UCLA PTSD Index for DSM-IV© has been revised for the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*). This revised version has child, adolescent, and parent forms; the adolescent form was used with study participants.

Validity across all versions is reported by numerous studies that have found higher scores among traumatized samples than control samples. Convergent validity has been supported by the agreement of cut-off scores with a PTSD diagnosis. Several reports have found Chronbach's alpha to fall in the range of 0.90. Excellent internal reliability and test-retest reliability with a range from good to excellent has been reported for the original version (Steinberg, Brymer, Decker, & Pynoos, 2004). Chronbach's alpha for the UCLA PTSD Index for DSM-IV© severity scores for this sample were .90; scale means were 31.98 (SD = 14.27). PTSD severity scores and PTSD diagnostic subcategories for this sample were strongly correlated, $r(58) = .61$, $p < .01$.

This measure assesses a child's exposure to 26 types of traumatic events and assesses DSM-IV PTSD diagnostic criteria. The participants initially check "Yes" or

"No" to indicate whether or not they experienced a specific event (e.g., "Being hit, punched, or kicked very hard at home") and how they feel about an event they had experienced (e.g., "Where you scared that you would be hurt badly?"). The participants then indicate the extent to which they endorse statements relating to how often they experienced problem areas during the last month using a 5-point Likert scale (0 = None, 4 = Most). A total PTSD severity score can be calculated using 17 of the 22 responses to these statements with corresponding "cut-off" points relating to clinical significance levels, although empirically-determined cut-off scores are still being established. Although this measure is not designed to make a formal diagnosis, it can provide preliminary diagnostic information. This assessment may be administered in an interview format or via paper-and-pencil and was selected to be the "primary PTSD screening measure for the National Child Traumatic Stress Network," according to Mash and Berkley, 2007, p. 427. Both the data from the calculated PTSD diagnostic status and the severity scores were utilized in this study to assist in answering the research questions relating to the impact of traumatic distress on intervention efficacy.

The Achenbach Child Behavior Checklist, Teacher Report Form for Ages 6-18

The Achenbach Child Behavior Checklist, Teacher Report Form for Ages 6-18 is an assessment that enables professionals to quickly and effectively assess diverse aspects of adaptive and maladaptive functioning in children (Achenbach & Rescorla, 2001). The reliability and validity has been well documented in a number of studies. The scaling statements on the Checklist request teacher ratings of behavioral, emotional, and social problems. The Checklist consists of 120 statements relating to the youth's behavior (e.g., "Gets into many fights"). Responses are recorded using a Likert scale: 0 = Not

True, 1 = Somewhat or Sometimes True, 2 = Very True or Often True. Problem items are grouped into syndrome scales including: anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, aggressive behavior, and other problems which are further categorized under total internalizing and externalizing behaviors. High scores reflect high levels of problems (Achenbach & Rescorla, 2001). Chronbach alphas for The Achenbach Child Behavior Checklist, Teacher Report Form for Ages 6-18 Rule-Breaking Behavior and Aggressive Behavior subscales for this sample were .66 and .88, respectively. Scale means were 4.42 (*SD* = 3.11) for Rule-Breaking Behavior and 7.30 (*SD* = 6.66) for Aggressive Behavior.

The youths' scores on the syndrome scale of "aggressive behavior" compose one of the dependent variables in this study; another is the "rule-breaking behavior" syndrome scale. This permits the opportunity to test the effectiveness of the intervention for strictly aggressive behavior (e.g., argues, fights, attacks, destroys things), as well as rule-breaking behavior (e.g., lies, cheats, steals, truant)--especially important due to the fact that rule-breaking behavior and aggressive behavior often occur concurrently, and every youth committed to the program has broken the law. Achenbach and Rescorla (2001) note that these scales may be used separately for research purposes.

Behavior Incident Report

The Behavior Incident Report is a 30-item checklist of behaviors, both positive (e.g., "Expressed a criticism or complaint appropriately") and negative (e.g., "Argued when told what to do"), that the youth may be observed exhibiting. This report was developed in the 1980's by Aggression Replacement Training® developers and was

adapted for use with girls by Cleare, 2001 (pp. 146-147). Permission to use Cleare's adaptation of this measure was granted by the author in 2008 (Appendix A).

Goldstein and Glick (1987) used this measure in all of the early studies to assess skill transfer and report that it is the most clearly reflective of all three Aggression Replacement Training® components. Chronbach's alpha for the Behavior Incident Report for this sample was .85 with a mean of 3.7 (*SD* = 3.03). The third dependent variable consists of the aggression scores from this checklist; the positive behavior scores from this checklist were utilized in the additional test that was conducted to determine whether or not a difference could be found in positive behaviors between those youths who participated in the intervention and those who did not.

Additional Instruments

Intake paperwork and psychiatric evaluations were reviewed to record the criminal charges and diagnostic information included in the descriptive analysis.

Procedures

Team Member Integrity

Two curriculum trainers and the principal investigator received manual-based training by an Aggression Replacement Training® master trainer and received a certificate of completion prior to project commencement; the facility director was designated as the project director. This project director is a licensed mental health counselor in the state of Florida. The principal investigator possesses a license to practice clinical social work in the state of Florida. One curriculum trainer resigned her position prior to data collection; the remaining trainer conducted all Aggression Replacement

Training® groups and was responsible for data collection. All members of this study team met prior to, during, and after the training component of the project to review project guidelines and requirements, as well as to discuss any matters of importance that arose.

Participant Protections

Institutional Review Board approvals from the Florida Department of Juvenile Justice and the University of South Florida were sought and obtained before the study commenced (Appendices B and C). The University of South Florida Institutional Review Board granted continuing approval for the study in 2010, 2011, and 2012 (Appendices D, E, and F).

Assent and consent forms were presented to the participants and legal guardians; clarification was provided and questions answered by the principal investigator and curriculum trainer. The forms were read by the curriculum trainer or project director. A translator would have been made available if reading or language barriers existed; no parent, guardian, or youth required this type of assistance. All information obtained will remain confidential; the study team members signed a privacy and security agreement provided by the Institutional Review Board of the Florida Department of Juvenile Justice.

All data resulting from this project is to be published in aggregate form. All participants were de-identified by using a numerical code in lieu of the participant's name. The principal investigator was responsible for de-identifying each participant. The project director was responsible for securing the assessment forms in a locked file until the principal investigator could physically collect the instruments from the facility.

The data obtained will be returned to the Florida Department of Juvenile Justice or destroyed at the Department's request. Until that time, the data will be stored in a locked file in the office of the principal investigator.

Initial Responsibilities Regarding Participants

The curriculum trainer and/or the principal investigator offered an informational presentation regarding the intervention and research study to youth in the facility. A sign-up sheet was made available to those youths who were interested in participating and questions were answered. The curriculum trainer and principal investigator were available to answer any questions prior to the start of each group intervention and before assent and consent forms were signed. The curriculum trainer and principal investigator requested and obtained the signed assent forms and verbal consent for every participant before the study commenced; written consent was obtained in person or via mail.

Inclusion Criteria

The inclusion criteria for the study were: (1) the participant must be a female between the ages of 13 and 18 who was committed to the juvenile justice program for at least 12 weeks; (2) a consent form must have been signed by the parent/guardian (see Appendix G), and court approval must have additionally been obtained for wards of the state and for youths whose legal guardian is not a biological parent; (3) an assent form must have been signed by the participant (see Appendix H); (4) the participants in the experimental group had never received Aggression Replacement Training® in the past; and (5) they agreed to now fully participate in and complete the Aggression Replacement Training® curriculum. No compensation was provided.

Exclusion Criteria

Youth who had physical or mental impairments or language barriers that might interfere with their ability to actively participate were to be excluded from the study. No youth who agreed to participate met exclusion criteria.

Randomization

The plan for randomization was to assign a number to the names of eligible youths and randomly assign prospective participants to either an experimental group or a comparison group using Research Randomizer Form v4.0© (Urbaniak & Pious, 2008) prior to the beginning of each of the six 10-week Aggression Replacement Training® group interventions.

Although planned, true randomization was not accomplished. The curriculum trainer needed to assign exactly 10 youths to each Aggression Replacement Training® group prior to the beginning of each 10-week group intervention, per program requirements. When fewer than 20 youths agreed to participate in the study prior to the beginning of a group, 10 youths still had to be randomly chosen to participate in that group, upsetting the "50/50 chance of being selected" requirement. This requirement was waived after the first two groups were held due to time restrictions, but having fewer comparison group members initially and fewer experimental group members participating in the intervention at a time meant that more groups would need to be conducted. The only way to randomize as best as possible was to continue to conduct groups and then "add" remaining comparison group members together until the data from at least 30 comparison group members and 30 experimental group members was

collected. In no instance did more than 20 youths agree to participate in the study prior to the start of each of the six group interventions that were conducted.

Data Collection: Pre-Tests

Up to 20 youths who had been selected to participate in the study as either members of the experimental or comparison group were first assessed using the UCLA PTSD Index for DSM-IV (Adolescent Version)© developed by Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998; the project director or curriculum trainer administered and collected these assessments. This is a self-report instrument; the study participants completed the assessment in the curriculum trainer's office within approximately 10 minutes.

Subsequent groups of randomly selected youths were also assessed using the UCLA PTSD Index for DSM-IV (Adolescent Version)© just prior to participation in the 10-week Aggression Replacement Training® intervention as either an experimental or comparison group member, and the project director or curriculum trainer collected the assessment data. The UCLA PTSD Index for DSM-IV (Adolescent Version)© was administered as a pretest only; no posttest trauma assessments were administered.

The youths' teachers completed the rating scales of the Achenbach Child Behavior Checklist, Teacher's Report Form for Ages 6-18 (Achenbach & Rescorla, 2001), and a program specialist who was familiar with and worked with the youth on a daily basis completed the Behavior Incident Report (Cleare, 2001, pp. 146-147; see Appendix I) for participants in both the comparison and experimental groups prior to commencement of each 10-week Aggression Replacement Training® group intervention. The curriculum trainer or project director collected these forms prior to the training.

All participants additionally received a medical exam by the staff nurse and general practitioner prior to commencement of the training to rule out possible medical causes relating to mood and behavior problems. No participants were diagnosed with any medical problems that may have interfered with participation in the study. A medical exam is standard protocol for all juveniles who are committed to the program.

Treatment Program

The experimental group youths participated in a 10-week Aggression Replacement Training® curriculum facilitated by the trainer after initial assessments by the youths, teachers, and program specialists had been conducted and collected. Six groups were held, and a maximum of 10 girls constituted a group. Each experimental group member participated in at least one hour of each of the three intervention components on a weekly basis.

The Aggression Replacement Training® curriculum consists of three coordinated components--Skillstreaming, Anger Control Training, and Moral Reasoning Training--which attempt to address the behavioral, cognitive, and emotional aspects that maintain aggressive behavior (Goldstein et al., 1998).

Skillstreaming

The goal of Skillstreaming is to remediate social difficulties (Goldstein et al., 2004, p. 8). The theoretical basis for Skillstreaming is Argyle and Kendon's (1967) social skills model, which asserts that individuals who effectively use all aspects of their social skills will achieve their social goals. Skillstreaming is a series of social learning procedures: modeling, role-playing, performance feedback, and transfer training. The curriculum consists of 50 skills broken down into six categories (Appendix J): beginning

social skills, advanced social skills, skills for dealing with feelings, skill alternatives to aggression, skills for dealing with stress, and planning skills (Goldstein et al., 1998, pp. 211-212).

Anger Control Training

Just as Skillstreaming is designed to teach youths what they *should* do in problematic situations; Anger Control Training teaches them what they should *not* do. This component is designed to help make anger arousal a less frequent occurrence and provide the means to learn self-control when anger is aroused. The trainer demonstrates the proper use of core anger reduction techniques, guides trainees' practice of the anger management steps, provides feedback, and supervises the trainees' practice outside of the group (Goldstein et al., 1998). Practice outside of the group is in the form of assignments recorded on a "Hassle Log," available in both a printed form developed by Goldstein et al., 1998, p. 78 (Appendix K), and a pictorial form developed by James Gilliam (1997), which was to be made available to youth who read poorly or do not read at all (pp. 81-82). Appendix L summarizes the content of a typical 10-session Anger Control Training sequence.

Moral Reasoning Training

Moral reasoning, according to Kohlberg (1984), develops in stages. Antisocial behaviors are associated with developmental delay, or lower levels of reasoning. Cognitive distortions, according to Gibbs (1993) can function to support the attitudes consistent with sociomoral developmental delay. These distortions may serve to rationalize the antisocial behaviors.

The Moral Reasoning Training component of Aggression Replacement Training® "promotes the development of sociomoral reasoning through social decision making meetings" (Goldstein et al., 2004, p. 106). During these meetings, the group members strive to make mature decisions concerning 10 specific problem situations (Goldstein et al., 1998, pp 295-324), see Appendix M. "The situations are designed to stimulate discussion helpful to promoting a more mature understanding of the reasons for moral values or decisions such as telling the truth, keeping promises, not stealing or cheating" (Goldstein et al., 2004, p. 61).

The experimental group members participated in the Aggression Replacement Training® intervention, and both the experimental and comparison group youths received treatment as usual at the facility. Treatment as usual consists of varying cognitive-behavioral, insight-oriented, and supportive individual and group therapeutic interventions offered on a daily basis. Three master's-level counselors provide the individual and group therapy at the program.

Group sessions to address substance abuse consist of workbook activities selected from *A New Beginning: Recovery Workbook* by Mildren Duggins Williams (2002) and from three workbook series published by Hazelden Publishing: *A Woman's Way Through the Twelve Steps* (S. Covington, 2002), *Adolescent Co-Occurring Disorders Series* (2005), and *How to Get Sober and Stay Sober* (2000). The girls also use an interactive journal: *VOICES: A Program of Self-Discovery and Empowerment* (S. Covington, 2004) during group sessions, and a volunteer from the local Salvation

Army facilitates a psychoeducational domestic violence group session once weekly. In addition to these daily group interventions, family therapy is held once monthly and restorative justice sessions are held once weekly.

Data Collection: Treatment Program Follow-Up

Teachers and program specialists again completed the Achenbach Child Behavior Checklist, Teacher's Report Form and Behavior Incident Report for all participating experimental and comparison group members two weeks after the experimental group members completed the full 10-week treatment program.

Treatment Fidelity

Treatment fidelity was monitored by the master trainer, principal investigator, trainer, and project director. Videotapes of the three sessions were recorded by the project director or curriculum trainer. The curriculum trainer chose the sessions to be taped.

The master trainer was provided with videotapes of two of the Aggression Replacement Training® components and the principal investigator's evaluation forms for review. One of the videotapes, the Anger Control component, was inadvertently destroyed when a computer crashed.

The principal investigator monitored fidelity by making random visits to the program and directly observing the group processes. The principal investigator directly observed each of the three Aggression Replacement Training® components delivered by the curriculum trainer. An "Instruction Evaluation" form-- provided in the trainee manual--was filled out after each observation, and feedback was provided to the trainer.

The curriculum trainer monitored fidelity by filling out an Instruction Evaluation form after group sessions and discussing the evaluation with the principal investigator.

The project director monitored fidelity by directly observing and videotaping the group sessions. Any concerns were to be reported to the principal investigator; no concerns were reported.

Chapter Four

Study Results

Analysis

This chapter initially discusses treatment fidelity and preliminary data screening, then describes the participants. The statistical analyses comparing the outcomes of aggressive and rule-breaking behaviors, including the trauma covariate, are then presented. An additional analysis follows, comparing the outcomes of positive behaviors. Separate tables present participant demographics, psychiatric disorders, and criminal charges. The final tables present the analyses results--including mean change scores, standard deviations, ANOVA *F* values, *p* values, and the partial eta squared statistic.

Treatment Fidelity Assessment

Videotapes (2) of the Aggression Replacement Training® group sessions were provided to a master trainer for review. The curriculum trainer received a composite score of 1.8 ("nearly competent") on a scale of 0 to 3 (0 = Not Competent, 1 = Borderline Competent, 2 = Competent, and 3 = Highly Competent) and an average rating of "satisfactory" on written evaluations. Fidelity errors noted on written evaluations were corrected during subsequent group sessions; this data was not analyzed by the principal investigator.

Preliminary Data Screening

The principal investigator initially scored all assessments and then scored the assessments a second time to verify accuracy. The principal investigator then entered all data into an IBM SPSS Statistics 19 data file and examined every entry. Four data entry errors were discovered and corrected. Prior to main analyses, all variables were initially examined for missing values, normality of distributions, and outliers. Frequency and descriptive statistics revealed no missing values, items, or outliers. *T*-tests revealed no significant differences for any of the non-analytical test variables.

Descriptive statistics revealed that three measured variables violated normality assumptions: Behavior Incident Report negative behaviors posttest scores (skewness = 1.32) and aggressive behaviors pretest scores (skewness = 1.53, kurtosis = 2.11) and posttest scores (skewness = 1.37, kurtosis = 1.10). Square root transformations of Behavior Incident Report negative behaviors posttest scores and aggressive behaviors pretest and posttest scores resulted in near normal distributions: BIR negative behaviors posttest: skewness = .50, kurtosis = -1.14; aggressive behaviors pretest: skewness = .38, kurtosis = .13; aggressive behaviors posttest: skewness = .25, kurtosis = -.75.

Descriptive Analysis

Participants

The participating youths were representative of the larger sample of youths committed to this facility at the beginning and end of data collection (Table 1). The participants ranged in age from 15 to 18 years; the mean age was 16.85 years (*SD* = .97). The mean age of experimental group members was 16.63 years (*SD* = 1.0); the mean age of comparison group members was 17.07 years (*SD* = .91). The “Race/Ethnicity”

distribution was skewed: Forty-one of the 60 youths reported being Caucasian (68.3%, *n* = 21 in comparison group and 20 in experimental group); 13 were African American (21.7%, *n* = 7 in comparison group and 6 in experimental group); 4 were Latina (6.7%, *n* = 1 in comparison group and 3 in experimental group); and 2 were of mixed race/ethnicity (3.3%, *n* = 1 in each group). The groups were almost evenly divided as to ethnic makeup.

All participating youths had abused illegal substances in the past and all were diagnosed with at least two *International Classification of Diseases and Related Health Problems, 10th Revision* (*ICD-10*) co-occurring psychiatric disorders by a licensed mental health professional (Table 2). Conduct Disorder was the most frequently occurring disorder, followed by Polysubstance Dependence and Cannabis Abuse.

Global Assessment of Functioning (GAF) Scale scores were obtained for 58 of the 60 youths. This measure is a report of the clinician's judgment of the individual's overall level of psychological, social, and occupational functioning on a scale of 0 to 100, initially operationalized by Luborsky (1962) in the Health-Sickness Rating Scale. GAF scores for this sample ranged from 30 (behavior is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgment OR inability to function in almost all areas) to 50 (serious symptoms OR any serious impairment in social, occupational, or school functioning) with a mean score of 44 (American Psychiatric Association, 2000, p. 34). The comparison group members' mean GAF score was 43.63 (*SD* = 4.66); the experimental group members' mean GAF score was 44.61 (*SD* = 3.82).

Type of past criminal charges was recorded for all participating youths (Table 3).

Over 60% of the youths had multiple counts (the number of occurrences of any single offense) of specific charges, with one youth having 19 separate counts of burglary alone.

Aggression Tests

Research Question One

Is there a difference in (a) aggressive behavior in the classroom, (b) rule- breaking behavior in the classroom, and (c) aggressive behavior outside of the classroom between those youths who have participated in the intervention and those who have not from pre-intervention to post-intervention?

The dependent variable was aggressive behavior in the form of scores (ratio level) derived from the two measures—The Achenbach Child Behavior Checklist, Teacher Report Form and the Behavior Incident Report--and the independent variables were time and treatment condition.

The results of three repeated measures ANOVA tests conducted with the two groups indicated whether or not within- and between-group differences exist, and whether or not differences exist over time between the mean pre- (Time 1) and posttest (Time 2) group scores of (a) aggressive behavior, as measured by the Achenbach Child Behavior Checklist, Teacher Report Form; (b) rule-breaking behavior, as measured by the Achenbach Child Behavior Checklist, Teacher Report Form; and (c) aggressive behavior outside of the classroom, as measured by the Behavior Incident Report.

There were no significant mean differences between the groups in aggressive or rule-breaking behaviors prior to the intervention.

The results indicated a non-significant Time X Treatment Condition interaction for aggressive behavior in the classroom ($p = .38$), for rule-breaking behavior in the

classroom (p = .65), and for aggressive behavior outside of the classroom (p =.61), indicating that participation in the group intervention did not significantly impact aggressive or rule-breaking behaviors for these participants.

The results additionally indicated a non-significant main effect of treatment condition for aggressive behavior in the classroom (p = .18), for rule-breaking behavior in the classroom (p = .29), and for aggressive behavior outside of the classroom (p = .80).

A significant main effect for time, however, was found in aggressive behavior in the classroom (p = .00), rule-breaking behavior in the classroom (p = .00), and aggressive behavior outside of the classroom (p = .00). Mean aggressive and rule-breaking behaviors for both groups decreased over the 12-week period. Although not a significant difference, experimental group members showed a greater overall decrease in mean scores than did comparison group members (Tables 4 and 5).

Traumatic Distress Tests

Research Question Two

Is there a mean difference in (a) aggressive behavior in the classroom, (b) rule-breaking behavior in the classroom, and (c) aggressive behavior outside of the classroom between those youths who have participated in the intervention and those who have not from pre-intervention to post-intervention, after controlling for the degree of traumatic distress?

The dependent variable was aggressive behavior in the form of scores (ratio level) derived from the two measures—The Achenbach Child Behavior Checklist,

Teacher Report Form and the Behavior Incident Report--and the independent variables were time and treatment condition. The covariate was the degree of traumatic distress in the form of scores, as measured by the UCLA PTSD Index for DSM-IV©.

The results of three repeated measures ANCOVA tests conducted with the two groups determined whether or not within- and between-group differences exist, and whether or not differences exist over time between the mean pre- (Time 1) and posttest (Time 2) group scores of (a) aggressive behavior, as measured by the Achenbach Child Behavior Checklist, Teacher Report Form; (b) rule-breaking behavior, as measured by the Achenbach Child Behavior Checklist, Teacher Report Form; and (c) aggressive behavior outside of the classroom, as measured by the Incident Report, after the effect of traumatic distress had been partialed out. The homogeneity of the regression effect was evident for the traumatic distress (severity level), and the covariate was linearly related to the group scores of aggressive and rule-breaking behaviors.

The mean PTSD severity score for all participants was 31.87 (*SD* = 14.21), with a minimum score of 0 and a maximum score of 58. The mean PTSD severity score for experimental group members was 36.47 (*SD* = 11.32); the mean PTSD severity score for comparison group members was 27.27 (*SD* = 15.47)—$t(58) = -2.63$, $p = .011$, a significant difference. Scores 38 and above are considered to be within the clinical range, although empirically-determined cut-off scores have yet to be established.

The results indicated a non-significant Time X Treatment Condition interaction for aggressive behavior in the classroom ($p = .27$), for rule-breaking behavior in the classroom ($p = .51$), and for aggressive behavior outside of the classroom ($p = .66$), indicating that participation in the group intervention did not significantly impact

aggressive or rule-breaking behaviors for these participants after adjustment by the covariate.

After adjusting for degree of traumatic distress, the results additionally indicated a non-significant main effect of treatment condition for aggressive behavior in the classroom (p = .22), for rule-breaking behavior in the classroom (p = .11), and for aggressive behavior outside of the classroom (p = .78). The relationship between treatment condition and the covariate, PTSD severity scores, was non-significant for aggressive behavior in the classroom (p = .92), for rule-breaking behavior in the classroom (p = .06), and for aggressive behavior outside of the classroom (p = .88).

After adjusting for degree of traumatic distress, the results additionally indicated a significant main effect of time for aggressive behavior in the classroom (p = .00) and for rule-breaking behavior in the classroom (p = .00), but a non-significant effect of time for aggressive behavior outside of the classroom (p = .17). The relationship between time and the covariate, PTSD severity scores, was non-significant for aggressive behavior in the classroom (p = .38), for rule-breaking behavior in the classroom (p = .46), and for aggressive behavior outside of the classroom (p = .90). Outcome statistics are provided in Table 6.

Research Question Three

Does the degree of posttraumatic distress moderate the effect of Aggression Replacement Training® on (a) aggressive behavior in the classroom, (b) rule-breaking behavior in the classroom, and (c) out-of-classroom aggressive behavior from pre-intervention to post-intervention for those participants who received the intervention?

The dependent variable was "Aggressive Behavior" in the form of the experimental group's scores (ratio level) derived from the two measures—The Achenbach Child Behavior Checklist, Teacher Report Form and the Behavior Incident Report—and the independent variables were time and the PTSD diagnostic group subcategories: "DSM-IV Full PTSD Diagnosis Likely," "Partial PTSD Likely," and "No PTSD."

The results of three repeated measures ANOVA tests determined whether or not within- and between-category differences exist, and whether or not differences exist over time between the mean pre- (Time 1) and posttest (Time 2) group scores of (a) aggressive behavior, as measured by the Achenbach Child Behavior Checklist, Teacher Report Form; (b) rule-breaking behavior, as measured by the Achenbach Child Behavior Checklist, Teacher Report Form; and (c) aggressive behavior outside of the classroom, as measured by the Behavior Incident Report.

Although the PTSD diagnostic group subcategories lacked variability, with 26 out of 30 experimental group members meeting criteria for a diagnosis of PTSD, repeated measures ANOVA tests were conducted as planned.

Figure 1 illustrates that 76.7% of all study participants met criteria for full PTSD (n = 46); 6.7% met criteria for partial PTSD (n = 4); and 16.7% did not meet criteria (n = 10). An independent samples t-test additionally revealed that significant differences exist between the experimental and comparison groups relative to meeting criteria for a PTSD diagnosis: $t(58) = -2.09$, $p = .04$. Nearly 87% (n = 26) of experimental group members and nearly 67% (n = 20) of comparison group members met criteria for PTSD.

Of the 10 participants who did not meet criteria for PTSD, 8 were comparison group members.

The results indicated a non-significant Time X PTSD diagnostic subcategory interaction for aggressive behavior in the classroom (p = .75), for rule-breaking behavior in the classroom (p = .96), and for aggressive behavior outside of the classroom (p =.92), indicating that PTSD diagnostic subcategory did not significantly impact aggressive or rule-breaking behaviors for the experimental group member participants.

The results additionally indicated a non-significant main effect of PTSD subcategories for aggressive behavior in the classroom (p = .46), for rule-breaking behavior in the classroom (p = .36), and for aggressive behavior outside of the classroom (p = .75).

A non-significant main effect of time was found in aggressive behavior in the classroom (p = .06), for rule-breaking behavior in the classroom (p = .15), and for aggressive behavior outside of the classroom (p = .30). Outcome statistics are provided in Table 7.

Due to the lack of variability in the PTSD diagnoses, the relationship between the experimental group members' PTSD severity scores and the (calculated) change in aggressive and rule-breaking behaviors pre- to posttest, as measured by the aggressive behavior scale and rule-breaking behavior scales of the Achenbach Child Behavior Checklist, Teacher Report Form and the Behavior Incident Report, was also examined. Pearson's product-moment correlations indicated a non-significant relationship between the PTSD severity scores and aggressive behavior in the classroom (r = -.01),

rule-breaking behavior in the classroom (r = .11), or aggressive behavior outside of the classroom (r = .08) change scores.

The degree of traumatic distress that experimental group members reported experiencing in this sample did not appear to impede the learning process or have an impact on their aggressive or rule-breaking behaviors.

Positive Behavior Test

The Behavior Incident Report records both negative and positive behaviors. Negative behaviors did not significantly decline for the girls in this study who participated in the Aggression Replacement Training® intervention, so an additional test was conducted to determine whether or not a difference could be found in mean positive behaviors between those youths who participated in the intervention and those who did not. A statistical correction for Type I error was not used due to the exploratory nature of the study and modest sample size.

The dependent variable was "Positive Behavior" in the form of scores (ratio level) derived from the Behavior Incident Report, and the independent variables were time and treatment condition.

The results of a repeated measures ANOVA test conducted with the two groups indicated whether or not within- and between-group differences exist, and whether or not differences exist over time between the mean pre- (Time 1) and posttest (Time 2) group scores of positive behavior outside of the classroom, as measured by the Behavior Incident Report.

The mean pre-test positive behavior score for experimental group members was 6.73 (*SD* = 3.42); the mean pre-test positive behavior score for comparison group members was 9.17 (*SD* = 3.38)—$t(58) = 2.77$, $p = .01$, a significant difference.

The results indicated a non-significant Time X Treatment Condition interaction for positive behavior ($p = .50$), indicating that participation in the group intervention did not significantly impact positive behaviors for these participants.

The results additionally indicated a significant main effect of Treatment Condition for positive behavior ($p = .00$) due to significant differences in mean pre-test positive behavior scores.

A significant main effect of time was also found for positive behavior ($p = .00$). Mean positive behaviors for both groups increased over the 12-week period. Although not a significant difference, experimental group members showed a greater overall increase in mean scores than did comparison group members. Outcome and descriptive statistics for both groups are presented in Table 8.

Chapter Five

Discussion

This chapter initially summarizes the primary findings of the study and then discusses these findings in relation to study limitations and other possible factors that may have influenced outcomes. Directions for future research are then presented and implications for social work practice offered.

Findings

The original goal of this study was to ascertain whether or not participation in the group intervention Aggression Replacement Training® would reduce aggressive tendencies in adolescent females who were committed to a residential program for offenders in Florida. Adolescent females--who are being charged with crimes of violence more often now than in the past--are cycling in and out of juvenile justice programs designed to rehabilitate them while their aggressive behaviors continue or even worsen. Research has shown that recidivism will not be reduced unless treatment is provided (Cooke & Philip, 2000), and effective treatment options for girls are still being explored.

Another goal of this study was to ascertain whether or not the degree of traumatic distress reported by the girls would pose a responsivity problem as to the efficacy of the intervention; girls in "the system" commonly present with a history of physical and sexual abuse and corresponding incidence of Posttraumatic Stress Disorder.

Aggression Replacement Training® did not *replace* aggressive behaviors with pro-social behaviors in this small sample of girls, although mean aggressive behaviors did decrease and positive behaviors did increase for all study participants. Mean aggressive behaviors and mean positive behaviors increased more so for the experimental group girls, but significant mean differences between the experimental and comparison groups were not found.

Some of the aggressive behaviors may have been replaced with positive behaviors, but anger displays still occurred. Although all three Aggression Replacement Training® components involve knowledge and skill acquisition, the Anger Control component also teaches participants how to manage emotions and change existing patterns of behavior. Changing an inappropriate response to a feeling may be in the best interests of all parties involved, but managing angry feelings while demonstrating newly acquired skills may just be difficult.

Some participants may have experienced more difficulty than others learning the new techniques. Aggression Replacement Training® utilizes concrete social learning and behavioral strategies recommended by Dowden and Andrews (1999) and Wilson, Bouffard, and MacKenzie (2005) for this population. Some experimental group members, however, may have a low verbal IQ and deficits in executive cognitive functioning (Vitaro et. al, 2006), making learning more challenging and time-consuming.

The time of day that the trainer delivered the intervention could possibly have had some effect on the outcome. Three days per week from 7:30 a.m. to approximately 9:00 a.m. for 10 weeks, the experimental group girls participated in Aggression Replacement Training®. Jensen (1998) reports that the brain rehearses the prior day's

learning during the rapid eye movement (REM) state of sleep, and waking up too early affects REM sleep and memory enhancement. Dahl (1999) reports that adolescents require more than nine hours of sleep, and sleep deprivation can mimic or exacerbate attention deficit-hyperactivity disorder. Another consideration, according to the literature, is that time of day does affect learning; all learners do not perform best at a certain time of day.

Time could possibly be an issue as to posttest assessment. The experimental group members were assessed just two weeks after completing the intervention. Two weeks may not have been long enough to be able to detect noticeable behavioral differences.

Time may be another issue as relating to the Aggression Replacement Training® components. Skillstreaming, the behavioral or "doing" component, teaches one or more pro-social skills during each week. Moral Reasoning Training, the cognitive or "thinking" component, promotes the development of sociomoral reasoning through weekly "social decision-making meetings" where "problem situations" create opportunities for participants to take the perspectives of others. For each of these components, the new skill or mature moral cognition is learned on a weekly basis. With Anger Control Training, the emotion-targeted or "feeling" component, the "chain of techniques" is presented for the first seven weeks; weeks eight through ten constitute rehearsals of the full sequence. The rather intricate process of learning to manage angry feelings takes seven weeks, whereas the learning of appropriate social skills and right from wrong occurs on a weekly basis. Positive and negative behaviors were measured just two weeks after participation in the 10-week intervention. It is possible that the

experimental group members did not have time to adequately learn and practice the full Anger Control sequence to be able to manage their angry feelings and insufficient time to learn and utilize more of the pro-social skills taught. Skill transfer to the home environment after discharge was also not examined in this study.

It is also possible that some individuals could not relate to the material that was presented in the Moral Reasoning component of the intervention. Developers of the intervention assumed that group participants would be in the conventional stage of moral development (and they probably would not be in the commitment program if they had not advanced from preconventional), but this component was originally designed using Kohlberg's theory (1958). Gilligan (1982) argued that this theory did not adequately address the concerns of women and developed an alternative theory. In her theory, the transitions between the three major divisions involve changes in the sense of self, rather than changes in cognitive abilities. Interpersonal relationships and the ethics of compassion and care, not just rights and rules, are at the center of a woman's morality. The conventional stage for females is marked by a focus on important others to the exclusion of the self.

The scenarios presented in the Moral Reasoning component of the intervention, however, were adapted for use with female adolescents and incorporate both "connections and care," as well as "separation and justice." These girls are repeat offenders, and the likelihood that their defiant and aggressive acts are all self-sacrificing acts for the benefit of others is not great (especially violation of probation, the most common offense).

Even if the girls' unlawful acts were all selfless acts and moral judgment not an issue at all, they were not discouraged from "coming together, trusting, speaking about personal issues, or forming bonds of friendship," (Covington, 2001, p. 12) during group. The girls appeared to enjoy the group process and develop the mutually trusting and empathic relationships that are central to a woman's morality (Gilligan, 1982) and necessary for the girls' psychological well being (Covington, 2001).

Posttraumatic distress, commonly experienced by girls in juvenile justice programs and prevalent in this sample, also did not appear to influence the extent to which the girls could learn and benefit from participation in the intervention. The mean severity score was significantly higher for the experimental girls (M = 36.47) than for the comparison group members (M = 27.27), although both means are still considered in the "sub-clinical" range. The degree of distress or PTSD diagnosis had no significant impact on, or relationship with, intervention effectiveness in this sample.

Trauma-informed protocols, which acknowledge and address the impact of past violence and trauma, are in place in this program; possibly the girls felt safe and better able to manage their emotional responses. These protocols are not specific services; they are guiding principles designed to be sensitive and respectful to individual needs. One experimental group member was observed placing her feet and hands on the wall and stating, "I like the walls nearby; they protect me" when responding to a question as to whether or not the (small) room made her feel closed in.

If the experimental group members felt safe, were not unduly influenced by time of day or psychological distress, and could relate and attend to the material presented, then maybe they did not master the skills presented, or they just chose not to apply what

they learned. The social environment may have some bearing on the outcome results. The need to gain or maintain social status within the residential community (Walcott et al, 2008) may have been perceived to be greater than the need to behave pro-socially. Evolutionary theorists would consider this an adaptive strategy.

As Pellegrini and Bartini (2001) and Walcott et al. (2008) discovered, aggressive adolescents are more popular with their peers. Maintaining social status within a peer culture—especially a culture of offenders—is valuable to adolescents. Maybe, in a culture of female offenders who value relationships as well as antisocial behavior, behaving "differently" is just not worth the risk.

Unlike earlier studies (Goldstein et al., 1987, 1989; Nodarse, 1997; Nugent et al., 1999; Gundersen and Svartdal, 2006) of the effectiveness of Aggression Replacement Training® with male and female participants of similar ages that resulted in significant reductions in aggressive behavior, and similar to the studies conducted by Goldstein et al. (1987, 1994), Moynahan and Stromgren (2005), and Cleare (2001), significant reductions in aggressive behavior post intervention in this study with adolescent female offenders were not found.

Cleare's study (2001) is the only study that involved (pre-adolescent and) adolescent females in a residential facility, although they were not offenders. The assessments used to measure aggressive behavior (both inside and outside of the classroom) were identical to those that were used in this study, and similar tests were conducted. The results indicated similar non-significant reductions in aggressive and rule-breaking behavior. Unlike this study, however, significant increases in positive behavior post intervention were found.

Limitations

The most obvious limitation of this study is the small sample size. Thirty participants were involved in an intervention that lasted for 10 weeks, and a maximum of 10 youths participated at one time. This was a time-consuming process. The risk of jeopardizing the fidelity of the study due to staffing and programmatic changes would have been greatly increased if an attempt was made to procure a larger sample. An online sample size calculator (Soper, n.d.) indicated that at least 64 members per group would have been needed for an anticipated "moderate" (.5) effect size; 26 members per group would have been needed for an anticipated "large" (.8) effect size.

A second critical limitation is the study design change from experimental to quasi-experimental—random assignment was not truly implemented due to a programmatic requirement that 10 youths compose a group intervention.

Another limitation is that the evaluators (teachers and residential counselors) were likely not blind to the treatment conditions—ten girls were not "on the floor" three times per week from 7:30 a.m. to approximately 9:00 a.m. for 10 weeks. A fourth is generalizability: all youths were committed to one program in one state. The fact that they were all committed to the same residential program could also be considered a limitation in another sense: they all interacted with and influenced each other on a daily basis for months. Although the experimental group members were instructed not to discuss or share any group material with the girls who did not participate in the intervention (and there were no reports of any violations), there is no guarantee that this did not occur.

A final limitation is that the trainer was not a "seasoned" or "master" trainer; these six groups represented the first opportunities for the trainer to deliver the intervention after initial training.

According to Bellg, Borrelli, Resnick, Hecht, Minicucci, Ory, Ogedegbe, Orwig, Ernst, and Czajkowski (2004), accurate conclusions about the effectiveness of study interventions can only be drawn if threats to the study's internal and external validity have been addressed. Provider training and delivery of treatment are two of the five strategic areas mentioned as part of a comprehensive treatment fidelity plan to address threats. Only one curriculum trainer delivered the Aggression Replacement Training® curriculum to the study participants, and this trainer did receive standardized training. The curriculum trainer was unable to attend a "booster session" during the study time frame, however, and received a rating of "nearly competent" by the master trainer after the delivery of six Aggression Replacement Training® group sessions. This rating indicates that model protocol was not always followed, and some "delivery contamination" may have occurred.

This study did not take into consideration any particular sample subsets, such as participants with common demographic characteristics and/or types of offending behaviors (charges). The experimental group members did initially exhibit more aggressive behavior overall than the comparison group members, but forms, frequency, and/or intensity of aggression were not delineated.

Holmqvist, Hill, and Lang (2009) also underscore the importance of the individual adolescents' view of how well the treatment fits their perception of their problems; Aggression Replacement Training® should be "used for those adolescents who

are motivated for it." Motivation is probably not an issue for the girls in this study, however. The girls chose to participate in the intervention and were free to opt out at any time.

Future Research Directions

Those who undertake future studies of the efficaciousness of Aggression Replacement Training® with offending adolescent females should procure a random sample of adequate size and employ a (highly) competent trainer. The study participants should be free to opt in, as well as out of the study once begun. The time of day that the intervention is offered should be suitable to any individual opting in. Additional demographic variables should be recorded and included in the analysis, as should forms and frequency of aggressive behavior, so that possible subgroups can be identified in the final analysis. Modifications to the Anger Control component should be considered—offering the same format more than once weekly or condensing the material to a format with fewer steps. Offering the intervention for a longer time period might also be an option so that the girls have more time to learn and practice the skills while in the program. Follow-up assessments should be conducted several months after discharge to determine if skills not evident while in the commitment program might have transferred once in the home environment. Recidivism rates should be monitored for one year or longer after discharge from the program.

Future studies might also include boys and non-offending girls as comparison groups and a qualitative component. Many girls in the study opted to provide feedback regarding their experience. Their feedback regarding what they liked or did not like and what "worked" or did not "work" for them could be compared with prior offenses and

demographic variables in the hope of identifying sample subsets. Researchers may gain a more accurate picture of who is more amenable to this type of treatment option. Participant feedback may also clarify the specific needs of female offenders and help promote the "development of differentiated treatment that adequately address the needs of girls" (Hubbard & Matthews, 2008, p. 245), contributing to the macro- versus micro-level debate concerning what might *really* work for aggressive girls. What could be more efficient and effective than just asking, "What do you need?" That "works," too.

Implications for Social Work Practice

The results of this study offer several implications for social work practice. Mean aggressive and rule-breaking behaviors did decrease for all study participants while in the commitment program and during the study timeframe (twelve weeks), and the decrease was greater for the experimental group members. Mean positive behaviors also increased for all study participants, and the experimental group members' increase was greater than the comparison group members.

The majority of girls in the program did report experiencing a high level of posttraumatic distress, but the degree of distress did not significantly impact the efficacy of the intervention for those who participated.

The girls actively participated in the intervention 3 times per week for 10 weeks, and only two girls opted to withdraw from the training once it had begun. Both girls reported that they did not want to attend group therapy at 7:30 in the morning.

Conclusion

Arrest rates of adolescent girls who commit violent crimes are increasing at an unprecedented rate, and juvenile justice professionals need to offer interventions that are

effective in reducing violent behavior. Female juvenile offenders are cycling in and out of juvenile justice programs designed to rehabilitate them, while their aggressive behaviors continue or even worsen.

Individualized treatment services that work for girls with aggressive tendencies and histories of trauma and victimization are needed in residential commitment programs, and research is lacking as to effective programming for this population.

The results of this study indicate that targeted, concrete social learning and behavioral interventions that are provided in environments that support girls' need for support, intimacy, and safety can be beneficial in helping to improve social functioning and reduce recidivism rates in this population. Offering a continuation of these types of interventions to offenders in the community after discharge would help to reinforce and maintain the basic skills acquired in the program. The girls could have the ongoing support needed to become successful, law-abiding citizens. Aggression Replacement Training® should be considered as an effective tool in the acquisition of pro-social skills and in the reduction of aggressive and rule-breaking behaviors for adolescent female offenders. Additional research is needed, however, to ascertain this intervention's degree of effectiveness with this population.

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Appendices

Appendix A: Cleare Approval Letter

[redacted]
June 18, 2008

Mary Jane Cleare
c/o Pro Quest Author's School Relations Dept.
789 E. Eisenhower
P.O. Box 1346
Ann Arbor, MI 48106-1346

Dear Ms. Cleare,

I would like to ask your permission to use an adaptation of the Behavior Incident Report (p. 146) you used in your dissertation study, "Effects of Social Cognitive Skills Training with Angry, Aggressive Adolescent Females." I am conducting a similar study for dissertation purposes and am asking the direct care staff to assess girls who are committed to a juvenile justice facility using the Behavior Incident Report.

You may contact me at the address above, or you may reach me at my e-mail address: jodyanneerickson@yahoo.com. I look forward to hearing from you.

Sincerely,

[redacted]
Jody Erickson

Appendix B: Florida Department of Juvenile Justice Approval Letter

FLORIDA DEPARTMENT OF JUVENILE JUSTICE

Charlie Crist, Governor **Frank Peterman, Jr., Secretary**

July 1, 2009

Jody Erickson
P.O. Box 37094
Tallahassee, FL 32315

RE: The Efficacy of Aggression Replacement Training with Female Juvenile Offenders in a Residential Commitment Program

Dear Jody Erickson,

I am pleased to inform you that the Florida Department of Juvenile Justice (DJJ) Institutional Review Board (IRB) has approved your proposed study. This approval covers only the study identified in your proposal.

The following conditions apply:

- All information obtained from DJJ is confidential. It may not be disclosed to any person, business, government agency, or other entity unless the disclosure is authorized in writing by DJJ.
- You may not disclose any information that could reasonably lead to the identification of any individual youth. All data resulting from this research project must be published in aggregate form.
- Any person working on this research project must agree to be bound by these conditions concerning confidentiality of information.
- Any person working on this research project that has direct contact with youth or is working with identifiable data must submit proof of a completed DJJ background screening to the DJJ IRB prior to the start of the project.
- We require that you provide DJJ with a review copy of the final publication with a reasonable comment period prior to publication of the study findings. Additionally, we require that you provide a one to five page summary of the final project that follows the guidelines provided on the DJJ IRB website. This summary will be posted on the DJJ IRB website. Please send the items to the IRB at the address listed below.

Sincerely,

Bob Dale
Institutional Review Board

2737 Centerview Drive • Tallahassee, Florida 32399-3100 • (850) 488-1850
http://www.djj.state.fl.us

The mission of the Department of Juvenile Justice is to increase public safety by reducing juvenile delinquency through effective prevention, intervention and treatment services that strengthen families and turn around the lives of troubled youth.

Appendix C: University of South Florida Approval Letter

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035· · · Tampa, FL 33612-4799
(813) 974-5638· · · FAX (813) 974-5618

November 3, 2009
Jody Erickson
College of Behavioral & Community Sciences
PO Box 37094
Tallahassee, FL 32315

RE: **Full Board Approval** for Initial Review
IRB#: 108382 I
Title: *The Efficacy of Aggression Replacement Training with Female Juvenile Offenders in a Residential Commitment Program*
Study Approval Period: 10/16/2009 to 10/16/2010

Dear Jody Erickson:

On October 16, 2009, Institutional Review Board (IRB) reviewed and withheld approval of the above application pending revisions requested. The revisions have been received, reviewed and approved. Therefore the study is **APPROVED for the period indicated above** including the following:

1. Parental Permission Consent Form
2. Child Assent form

Study involves:
1. Children (aged 13-17)
2. Juvenile Offenders

This study involving children falls under 45 CFR 46.404 – Research not involving greater than minimal risk. (and) 45 CFR 46.305 Prisoner population.

Please note, if applicable, **only use the IRB-Approved and stamped consent forms for participants to sign.** The enclosed informed consent/assent documents are valid during

the period indicated by the official, IRB-Approval stamp located on page one of the form. Make copies from the enclosed original.

Please reference the above IRB protocol number in all correspondence regarding this protocol with the IRB or the Division of Research Integrity and Compliance. In addition, you can find the Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities in the conduction of human participant research on our website. Please read this guide carefully. It is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-2036.

Sincerely,

Krista Kutash, Ph.D., Chairperson
USF Institutional Review Board
Cc:Various Menzel/cd, USF IRB Professional Staff
Mary Armstrong PhD; Lisa Rapp-Paglicci PhD

Appendix D: University of South Florida Approval Letter, 2010

USF
UNIVERSITY OF
SOUTH FLORIDA

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

September 30, 2010

Jody Erickson
College of Behavioral and Community Science
PO Box 37094
Tallahassee, FL 32315

RE: **Full Board Approval** for Continuing Review
IRB#: 108382
Title: *The Efficacy of Aggression Replacement Training with Female Juvenile Offenders in a Residential Commitment Program*
Study Approval Period: 10/16/2010 to 10/16/2011

Dear Ms. Erickson:

On 9/17/2010, Institutional Review Board (IRB) reviewed and **APPROVED** the above application **for the period indicated above** including the following:

1. Parental Permission Consent Form
2. Child Assent form

Please note, if applicable, the **enclosed informed consent/assent documents are valid during the period indicated by the official, IRB-Approval stamp located on page one of the form.** Valid consent must be documented on a copy of the most recently IRB-approved consent form. Make copies from the enclosed original.

Please reference the above IRB protocol number in all correspondence regarding this protocol with the IRB or the Division of Research Integrity and Compliance. In addition, we have enclosed an Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities in the conduction of human subjects research. Please read this guide carefully. It is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB.

Appendix E: University of South Florida Approval Letter, 2011

USF
UNIVERSITY OF SOUTH FLORIDA

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

September 21, 2011

Jody Erickson, MSW, LCSW
College of Behavioral and Community Sciences
P.O. Box 37094
Tallahasee, FL 32315

RE: Full Board **Approval** for Continuing Review
IRB#: 108382
Title: *The Efficacy of Aggression Replacement Training with Female Juvenile Offenders in a Residential Commitment Program*
Study Approval Period: 10/16/2011 to 10/16/2012

Dear Jody Erickson, MSW, LCSW:

On 09/16/2011 the Institutional Review Board (IRB) reviewed and APPROVED the above application for the period indicated above.

Please reference the above IRB protocol number in all correspondence regarding this protocol with the IRB or the Division of Research Integrity and Compliance. In addition, we have enclosed an Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities in the conduction of human subjects research. Please read this guide carefully. It is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John Schinka, Ph.D., Chairperson
USF Institutional Review Board

Enclosures

Cc: Anna Davis/am, USF IRB Professional Staff

Appendix F: University of South Florida Approval Letter, 2012

USF
UNIVERSITY OF SOUTH FLORIDA

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

September 21, 2012

Jody Erickson
College of Behavioral and Community Sciences
PO Box 37094
Tallahassee, FL 32315

RE: **Full Board Approval** for Continuing Review
IRB#: 108382
Title: *The Efficacy of Aggression Replacement Training with Female Juvenile Offenders in a Residential Commitment Program*
Study Approval Period: 10/16/2012 to 10/16/2013

Dear Ms. Erickson:

On 9/21/2012 the Institutional Review Board (IRB) reviewed and **APPROVED** the above application **for the period indicated above.**

This study involves children (aged 13-17) and falls under 45CFR46.404: Research not involving greater than minimal risk.

This study involves prisoners (juvenile offenders) and falls under 45CFR46.305: Prisoner population.

Please reference the above IRB protocol number in all correspondence regarding this protocol with the IRB or the Division of Research Integrity and Compliance. It is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB.

Please note the USF IRB is moving to a fully electronic system for the maintenance of active IRB protocols by the end of 2012. If you wish to continue this research after December 31, 2012, this historical "paper" study will need to be converted into the electronic system before 12/31/2012. Historical "paper" studies that are still active and have not been converted into the electronic system by 12/31/2012 will be administratively closed by the USF IRB. To convert your paper study, please go to https://arc.research.usf.edu/Prod/. If you have not yet registered for ARC (i.e., eIRB) you will need to do so prior to converting your paper study. If your participation in this research study will end prior to 12/31/2012, please do not convert the study to the electronic system and instead, submit a final report to close the study with the IRB. If you have any questions regarding this information, please feel free to contact us at 813-974-5638.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

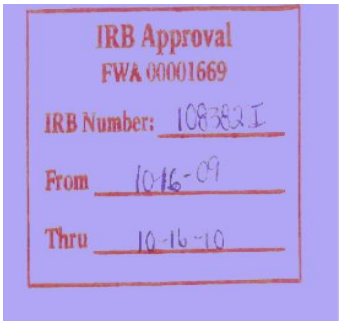
Sincerely,

John A Schinka, Ph.D.

John Schinka, PhD, Chairperson
USF Institutional Review Board

Cc: Anna Davis, USF IRB Professional Staff

Appendix G: Parental Consent



Parental Permission to Participate in Research

Information for parents to consider before allowing their child to take part in this research study

IRB Study # 108382

The following information is being presented to help you/your child decide whether or not your child wants to be part of a research study. Please read carefully. Anything you do not understand, ask the investigator.
We are asking you to allow your child take part in a research study that is called:
The Efficacy of Aggression Replacement Training® with Female Juvenile Offenders in a Residential Commitment Program

The person who is in charge of this research study is Jody Erickson, LCSW**.** This person is called the Principal Investigator, and she can be reached at (863) 441-2640. She is being guided in this research by Lisa A. Rapp-Paglicci, Ph.D., who can be reached at (813) 974-1809, and Mary I. Armstrong, Ph.D. Other research staff may be involved and can act on behalf of the person in charge. The person explaining the research to you may be someone other than the Principal Investigator. Other research personnel who you will be involved with include: Josette Lopez-Shipman. LMHC, and Sheree Hill, MSW.
The research will be done at: Frances Walker Halfway House, 5332 Riveredge Dr., Titusville, FL 32780.

Should your child take part in this study?

This form tells you about this research study. You can decide if you want your child to take part in it. This form explains:

- Why this study is being done.
- What will happen during this study and what your child will need to do.
- Whether there is any chance your child might experience potential benefits from being in the study.
- The risks of having problems because your child is in this study.

Before you decide:

- Read this form.
- Have a friend or family member read it.
- Talk about this study with the person in charge of the study or the person explaining the study. You can have someone with you when you talk about the study.
- Talk it over with someone you trust.
- Find out what the study is about.
- You may have questions this form does not answer. You do not have to guess at things you don't understand. If you have questions, ask the person in charge of the study or study staff as you go along. Ask them to explain things in a way you can understand.
- Take your time to think about it.

It is up to you. If you choose to let your child be in the study, then you should sign the form. If you **do not** want your child to take part in this study, you should **not** sign the form.

Why is this research being done?

The purpose of this study is to find out how well Aggression Replacement Training® helps your child control her anger.

Why is your child being asked to take part?

We are asking your child to take part in this research study because she is committed to a juvenile justice program and will be receiving this training at the program as part of her treatment. We want to find out whether or not this training is effective in reducing aggression in teenage girls.

What will happen during this study?

Your child will be asked to spend about 45 minutes completing an assessment prior to participation in the study while in the commitment program. The assessment is the UCLA PTSD Index for DSM-IV (Adolescent Version)©, which measures your child's level of stress. Other than completing this assessment and possibly participating in Aggression Replacement Training®, which is a group intervention that is offered three times a week for 10 weeks, your child will not need to do anything else.

Aggression Replacement Training® is a group intervention that seeks to change the

individual's thinking, emotion, and action by enhancing prosocial skills using modeling, role-playing, performance feedback, and transfer training; managing angry feelings via learning and practicing anger reduction techniques; and advancing moral reasoning through social decision-making meetings where group members strive to make mature decisions concerning (10) specific problem situations.

The names of all youths who have agreed to participate in the study and whose parents/guardians have given consent for their child to participate will be de-identified by using numbers in lieu of their names. Twenty numbers will be randomly selected by a computer randomization program, Research Randomizer Form v4.0©, prior to the beginning of each 10-week Aggression Replacement Training® group intervention. These numbers will then be randomly assigned to either an experimental group (those who will participate in the intervention at this time) or a control group (those who will **not** participate in the intervention at this time). The same process will be followed for each subsequent 10-week group intervention.

All youths at Frances Walker Halfway House will receive the individual and group therapy that they would normally receive; youths in the experimental Aggression Replacement Training® group will also receive this group intervention.

Group sessions may be videotaped for quality assurance purposes. Your child will have the option to agree to the recording. Only the Principal Investigator, the research staff, and the Aggression Replacement Training® master trainer will have access to the original tapes. If people who provide oversight to, or regulate, research studies are off site and ask to view the tapes, the tapes will be digitally altered prior to being physically or electronically mailed in order to protect your child's confidentiality. Your child's name will not be identified, and the tapes will be stored in a locked file until they are either destroyed or returned to the Florida Department of Juvenile Justice.

How many other people will take part?

Your child will be one of about 80 people who will take part in this study.

What other choices do you have if you decide not to let your child take part?

If you decide not to let your child take part in this study, that is okay. Your child is free

not to participate in this study. If you choose to allow her to participate, you are free to withdraw your consent and discontinue her participation in this research study at any time without this decision affecting your relationship, or your child's relationship, with the people in the juvenile justice program or with the investigators. Your child's participation, or lack of participation, will also have no impact on her length of stay at the facility or legal status. We will keep you informed of any developments which might affect your willingness to allow your child to continue to participate in the study. If you have any questions regarding your rights as a parent or guardian of the child participant, you may phone the Institutional Review Board (IRB) at: (850) 488-3102.

Will your child be paid for taking part in this study?

We will not pay your child for the time she volunteers while being in this study.

What will it cost you to let your child take part in this study?

It will not cost you anything to let your child take part in the study.

What are the potential benefits to your child if you let her take part in this study?

We cannot promise you that anything good will happen if you decide to allow your child to take part in this study. Her participation, however, will help us know whether the treatment we are providing is effective.

What are the risks if your child takes part in this study?

To the best of our knowledge, the things your child will be doing will not harm her or cause her any additional unpleasant experience.

Although we have made every effort to try to make sure this doesn't happen, your child may find some questions we ask upsetting. If you wish to discuss these or any other discomforts your child may experience, you may call the Principal Investigator listed on this form. Your child may also call the Principal Investigator or talk with an adult at the program.

In addition to becoming upset over questions we have asked, your child may experience something bad that we do not know about at this time.

What will we do to keep your child's study records private?

There are federal laws that say we must keep your child's study records private. We will keep the records of this study private by keeping them in a locked file. Your child's information will be added to the information from other people taking part in the study so no one will know who your child is. Jody Erickson will protect the confidentiality of your child's records to the extent allowed by law.

Certain people may need to see your child's study records. By law, anyone who looks at your child's records must keep them completely confidential. The only people who will be allowed to see these records are:

- Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your child's records. These include the University of South Florida Institutional Review Board (IRB) and the staff that work for the IRB. Individuals who work for the University of South Florida that provide other kinds of oversight to research studies may also need to look at your child's records.

- Other individuals who may look at your child's records include people who work for agencies of the federal, state, or local government that regulate this research. This includes the Department of Health and Human Services (DHHS) and the Office for Human Research Protections. The Florida Department of Health and the Florida Department of Juvenile Justice Institutional Review Board may also look at your child's records. They also need to make sure that we are protecting your child's rights and safety.

The research staff members are mandated reporters and are bound by Florida law to disclose any reports of abuse.

We may publish what we learn from this study. If we do, we will not let anyone know your child's name. We will not publish anything else that would let people know who your child is.

What happens if you decide not to let your child take part in this study?

If you do not want your child to be in the study, nothing else will happen. You should only let your child take part if both of you want to. Choosing not to allow your child to participate will in no way affect her care or treatment.

You can decide after signing this informed consent document that you no longer want your child to take part in this study. If you decide to allow your child to take part in the study, you still have the right to change your mind later. If you wish to stop your child's participation in this research study for any reason, you should contact Jody Erickson at (863) 441-2640. You may also contact the Florida Department of Juvenile Justice Institutional Review Board (IRB) Office at (850) 488-3102. Also, the people who are running this study may need for your child to stop. If this happens, they will tell you why.

You can get the answers to your questions, concerns, or complaints.

If you have any questions, concerns or complaints about this study, call Jody Erickson at: (863) 441-2640, or call Dr. Lisa Rapp-Paglicci at: (813) 974-1809.

If you have questions about your child's rights, general questions, complaints, or issues as a person taking part in this study, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343, or the Florida Department of Juvenile Justice Institutional Review Board at (850) 488-3102.

If your child experiences an adverse event or unanticipated problem, call Jody Erickson at (863) 441-2640.

Consent for Child to Participate in this Research Study

It is up to you to decide whether or not you want your child to take part in this study. If you want your child to take part, please read the statements below and sign the form if the statements are true.

I freely give my consent to let my child, _____, take part in this study and authorize that my child's health information, as agreed above, be collected/disclosed in this study. I understand that by signing this form I am agreeing to let my child take part in research. I have received a copy of this form to take with me.

_____ _____
Signature of Parent of Child Taking Part in Study Date

_____
Printed Name of Parent of Child Taking Part in Study

_____ _____
Signature of Parent of Child Taking Part in Study Date

_____
Printed Name of Parent of Child Taking Part in Study

Signatures of both parents are required unless one parent is not reasonably available, deceased, unknown, legally incompetent, or only one parent has sole legal responsibility for the care and custody of the child. When enrolling a child participant, if only one signature is obtained, the person obtaining the consent must check one of the reasons listed below:

The signature of only one parent was obtained because:

__
/_ / The other parent is not reasonably available. Explain: _____

__
/_ / The other parent is unknown.

__
/_ / The other parent is legally incompetent.

__
/_ / The parent who signed has sole legal responsibility for the care and custody of the child.

Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect.

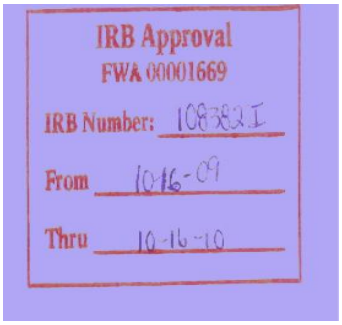
_____ _____

Signature of Person Obtaining Informed Consent Date

_____

Printed Name of Person Obtaining Informed Consent

Appendix H: Child Assent



Assent to Participate in Research

Information for Individuals under the Age of 18 Who Are Being Asked To Take Part in Research Studies

IRB Study # 108382

TITLE OF STUDY: The Efficacy of Aggression Replacement Training® with Female Juvenile Offenders in a Residential Commitment Program

WHY AM I BEING ASKED TO TAKE PART IN THIS RESEARCH?

You are being asked to take part in a research study about Aggression Replacement Training®. You are being asked to take part in this research study because you will be receiving this treatment while you are in the juvenile justice program, and we want to know how well Aggression Replacement Training® helps you to control your anger.

If you take part in this study, you will be one of about 80 people chosen for this study.

WHO IS DOING THE STUDY?

The person in charge of this study is Jody Erickson, LCSW, of the University of South Florida. She may be reached by telephone at: (863) 441-2640. She is being guided in this research by Lisa A. Rapp-Paglicci, Ph.D, who may be reached at (813) 974-1809, and Mary I. Armstrong, Ph.D. Other people who will be involved include Josette Lopez-Shipman, LMHC, and Sheree Hill, MSW.

WHAT IS THE PURPOSE OF THIS STUDY?

By doing this study, we hope to learn whether or not Aggression Replacement Training® is effective in reducing aggression in teenage girls.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The study will be take place at Frances Walker Halfway House. Other than the time it will take you to complete initial assessments and possibly participate in the intervention, this study will not take any additional time from your day.

WHAT WILL I BE ASKED TO DO?

You will be asked to complete an assessment prior to possible participation in Aggression Replacement Training®. This assessment asks questions about your feelings and experiences. This assessment is the UCLA PTSD Index for DSM-IV (Adolescent Version)©; it measures your level of stress. You should be able to complete the assessment in about 45 minutes. Other than your possible participation in, and completion of, the Aggression Replacement Training® itself, you will not need to do anything else.

Aggression Replacement Training® is a group intervention that seeks to change a person's thinking, emotion, and action by enhancing prosocial skills using modeling, role-playing, performance feedback, and transfer training; managing angry feelings via learning and practicing anger reduction techniques; and advancing moral reasoning through social decision-making meetings where group members strive to make mature decisions concerning (10) specific problem situations. Aggression Replacement Training® lasts for 10 weeks; 3 sessions, about 1-1 ½ hours each, are conducted each week.

The names of all youths who have agreed to participate in the study and whose parents/guardians have given consent for their child to participate will be de-identified by using numbers in lieu of their names. Twenty numbers will be randomly selected by a computer randomization program, Research Randomizer Form v4.0©, prior to the beginning of each 10-week Aggression Replacement Training® group intervention. These numbers will then be randomly assigned to either an experimental group (those who will participate in the intervention at this time) or a control group (those who will **not** participate in the intervention at this time). The same process will be followed for each subsequent 10-week group intervention.

All youths at Frances Walker Halfway House will receive the individual and group therapy that they would normally receive; youths in the experimental Aggression Replacement Training® group will also receive this intervention.

Group sessions may be videotaped for quality assurance purposes. You will have the option to agree to the recording. Only the Principal Investigator, the research staff, and

the Aggression Replacement Training® master trainer will have access to the original tapes. If people who provide oversight to, or regulate, research studies are off site and ask to view the tapes, the tapes will be digitally altered prior to being physically or electronically mailed in order to protect your confidentiality. Your name will not be identified, and the tapes will be stored in a locked file until they are either destroyed or returned to the Florida Department of Juvenile Justice.

You may, if you would like, provide feedback about the training when it is completed. We would appreciate your thoughts.

WHAT THINGS MIGHT HAPPEN THAT ARE NOT PLEASANT?

To the best of our knowledge, the things you will be doing will not harm you or cause you any additional unpleasant experience.

Although we have made every effort to try and make sure this doesn't happen, you may find some questions we ask you may upset you. If you wish to discuss these or any other discomforts you may experience, you may call the Principal Investigator listed on this form or the research staff members at the facility.

In addition to becoming upset over questions we have asked, you may experience something bad that we do not know about at this time.

WILL SOMETHING GOOD HAPPEN IF I TAKE PART IN THIS STUDY?

We cannot promise you that anything good will happen if you decide to take part in this study. Your participation, however, will help us know whether the treatment we are providing is effective.

What other choices do I have if I do not participate?

You are free not to participate in this study. If you choose to participate, you are free to withdraw your consent and discontinue participation in this research study at any time without this decision affecting your relationship to the people in your juvenile justice program or the investigator. Your participation, or lack of participation, will also have no impact on your length of stay in the program or legal status.

If you have any questions regarding your rights as a participant, you may phone the Florida Department of Juvenile Justice Institutional Review Board (IRB) office at: (850) 488-3102, or the University of South Florida Division of Research Integrity and Compliance at: (813) 974-9343.

DO I HAVE TO TAKE PART IN THE STUDY?

You should talk with your parents or anyone else that you trust about taking part in this study. If you do not want to take part in the study, that is your decision. You should take part in this study because you really want to volunteer.

If you do not think you want to take part in this study, you should talk this over with your parents and decide together.

IF I DON'T WANT TO TAKE PART IN THE STUDY, WHAT WILL HAPPEN?

If you do not want to be in the study, nothing else will happen. Choosing not to participate in this study will in no way affect your care and treatment.

WILL I RECEIVE ANY REWARDS FOR TAKING PART IN THE STUDY?

You will not receive any rewards for taking part in this study.

WHO WILL SEE THE INFORMATION I GIVE?

Your information will be added to the information from other people taking part in the study so no one will know who you are. Jody Erickson will protect the confidentiality of your records to the extent allowed by law. You understand that the Florida Department of Juvenile Justice Institutional Review Board has the right to review your records, along with the University of South Florida IRB and the Dept. of Health and Human Services.

The research staff are mandated reporters and are bound by Florida law to disclose any reports of abuse.

CAN I CHANGE MY MIND AND QUIT?

If you decide to take part in the study, you still have the right to change your mind later. If you wish to stop your participation in this research study for any reason, you should contact Jody Erickson at (863) 441-2640. You may also contact the Florida Department of Juvenile Justice Institutional Review Board (IRB) Office at (850) 488-3102 or the University of South Florida IRB at (813) 974-9343. Also, the people who are running this study may need for you to stop. If this happens, they will tell you why.

WHAT IF I HAVE QUESTIONS?

You can ask questions about this study at any time. You can talk with your parents or other adults that you trust about this study. You can talk with the person who is asking you to volunteer. If you think of other questions later, you can ask them.

Assent to Participate

I understand what the person running this study is asking me to do. I have thought about this and agree to take part in this study on Aggression Replacement Training®.

_____ _____

Signature of person agreeing to take part in the study Date

_____

Printed name of person agreeing to take part in the study

_____ _____

Signature of person providing information to participant Date

_____

Printed name of person providing information to participant

Behavior Incident Report

Youth's Name: _____

INSTRUCTIONS: Indicate which behavior(s) the youth exhibited **DURING THE PAST WEEK** by filling in the circle next to the specific behavior. The behavior **MUST HAVE BEEN OBSERVED BY A STAFF MEMBER**.

O Instigated an argument or fight
O Provided advice or in other ways helped others when they were upset or needed help
O Threatened, harassed, intimidated
O Expressed a criticism or complaint appropriately
O Failed to calm down when requested
O Expressed herself in an appropriate manner when frustrated or upset
O Became antagonistic when registering a complaint
O Accepted criticism without flaring up
O Was involved in bickering or squabbling
O Expressed feelings appropriately when she failed at something
O Argued when told what to do
O Controlled her temper
O Used profanity or vulgar language
O When she failed, she was able to try again
O Was short tempered and quick to show anger
O Identified future negative consequences for poor behavior
O Was involved in a physical fight
O Expressed or answered an accusation appropriately when accused by another youth
O Threw articles, e.g.—chair, plate, tray, book, etc.
O Calmed down in a reasonable amount of time when angry or aggravated
O Damaged school/personal property
O Was able to wait when she couldn't have her way right away
O Slammed doors, punched walls, kicked doors
O Expressed an opinion different from the group's in an appropriate manner
O Was physically restrained
O Showed an understanding of someone else's feelings
O Pushed, shoved
O Responded to someone else's anger without getting angry herself
O Displayed offensive gestures
O Expressed warm feelings, liking, or affection towards someone else

Note: From *Effects of Social Cognitive Skills Training With Angry, Aggressive Adolescent Females* (pp. 146-147), by M. J. Cleare, 2001, Keene, NH: M. Jane Cleare. Copyright 2001 by Bell & Howell. Adapted with permission.

Appendix J: Skillstreaming Skills for Adolescents

Skillstreaming Skills for Adolescents

Group I: Beginning Social Skills

1. Listening
2. Starting a Conversation
3. Having a Conversation
4. Asking a Question
5. Saying Thank You
6. Introducing Yourself
7. Introducing Other People
8. Giving a Compliment

Group II: Advanced Social Skills

9. Asking for Help
10. Joining In
11. Giving Instructions
12. Following Instructions
13. Apologizing
14. Convincing Others

Group III: Skills for Dealing with Feelings

15. Knowing Your Feelings
16. Expressing Your Feelings
17. Understanding the Feelings of Others
18. Dealing with Someone Else's Anger
19. Expressing Affection
20. Dealing with Fear
21. Rewarding Yourself

Group IV: Skill Alternatives to Aggression

22. Asking Permission
23. Sharing Something
24. Helping Others
25. Negotiating
26. Using Self-Control
27. Standing Up for Your Rights
28. Responding to Teasing
29. Avoiding Trouble with Others
30. Keeping Out of Fights

Appendix J: Skillstreaming Skills for Adolescents (Continued)

Group V: Skills for Dealing with Stress

31. Making a Complaint
32. Answering a Complaint
33. Being a Good Sport
34. Dealing with Embarrassment
35. Dealing with Being Left Out
36. Standing Up for a Friend
37. Responding to Persuasion
38. Responding to Failure
39. Dealing with Contradictory Messages
40. Dealing with an Accusation
41. Getting Ready for a Difficult Conversation
42. Dealing with Group Pressure

Group VI: Planning Skills

43. Deciding on Something to Do
44. Deciding What Caused a Problem
45. Setting a Goal
46. Deciding on Your Abilities
47. Gathering Information
48. Arranging Problems by Importance
49. Making a Decision
50. Concentrating on a Task

Note: From *Aggression Replacement Training: A Comprehensive Intervention for Aggressive Youth*, pp. 211-212, by Goldstein et. al., 1998, Champaign, IL: Research Press. Adapted with permission from the authors.

Appendix K: Hassle Log

HASSLE LOG

Name: _____ Date: _____

/_/ Morning /_/ Afternoon /_/ Evening

Where were you?

/_/ Classroom /_/ Bathroom /_/ Off grounds /_/ Bedroom /_/ Office

/_/ Hallway /_/ Dining Hall /_/ Common Area /_/ Rec Area /_/ Outside /_/ Other

What happened?

/_/ Somebody teased me. /_/ Somebody was doing something I didn't like.

/_/ Somebody took something of mine. /_/ I did something wrong.

/_/ Somebody started fighting with me. /_/ Other

Who was the other person?

/_/ Another youth /_/ Staff /_/ Teacher /_/ Counselor /_/ Other

What did you do?

/_/ Hit back /_/ Was restrained /_/ Talked it out /_/ Ignored it /_/ Broke something

/_/ Ran away /_/ Told aid or counselor /_/ Told peer or adult /_/ Walked away calmly

/_/ Cried /_/ Used Skillstreaming skill (identify): _____

/_/ Yelled /_/ Used anger control technique: _____

How angry were you?

/_/ Burning /_/ Really angry /_/ Moderately angry /_/ Mildly angry, but OK /_/ Not angry at all

How did you handle yourself? (circle one)

1—Poorly 2—Not so well 3—OK 4—Good 5—Great

Note: From *Aggression Replacement Training: A Comprehensive Intervention for Aggressive Youth*, p. 78, by Goldstein et. al., 1998, Champaign, IL: Research Press. Adapted with permission from the authors.

Appendix L: Overview of a 10-Week Anger Control Training Sequence

Overview of a 10-Week Anger Control Training Sequence

Week 1: Introduction

1. Explain the goals of Anger Control Training and "sell it" to the youngsters.
2. Explain the rules for participating and the training procedures.
3. Give initial assessments of the A-B-C's of aggressive behavior:
   A = What led up to it?
   B = What did you do?
   C = What were the consequences?
4. Review goals, procedures, and A-B-C's.

Week 2: Triggers

1. Review the first session.
2. Introduce the Hassle Log.
3. Discuss what makes you angry (triggers).
4. Role-play triggers.
5. Review the Hassle Log and triggers.

Week 3: Cues and Anger Reducers 1, 2, and 3

1. Review the second session.
2. Discuss how to know when you are angry (cues).
3. Discuss what to do when you know you are angry.
   Anger reducer 1: Deep breathing
   Anger reducer 2: Backward counting
   Anger reducer 3: Pleasant imagery
4. Role-play triggers + cues + anger reducers.
5. Review the Hassle Log; triggers; cues; and anger reducers 1, 2, and 3.

Week 4: Reminders

1. Review the third session.
2. Introduce reminders.
3. Model using reminders.
4. Role-play triggers + cues + anger reducer(s) + reminders.
5. Review reminders.

Week 5: Self-Evaluation

1. Review the fourth session.
2. Introduce self-evaluation.
   Self-rewarding
   Self-coaching
3. Role-play triggers + cues + anger reducer(s) + reminders + self-evaluation.
4. Review self-evaluation.

Appendix L: Overview of a 10-Week Anger Control Training Sequence (Continued)

Week 6: Thinking Ahead (Anger Reducer 4)

1. Review the fifth session.
2. Introduce thinking ahead.
   Short- and long-term consequences
   Internal and external consequences
3. Role-play "if-then" thinking ahead.
4. Role-play triggers + cues + anger reducer(s) + reminders + self-evaluation.
5. Review thinking ahead.

Week 7: Angry Behavior Cycle

1. Review the sixth session.
2. Introduce the Angry Behavior Cycle.
   Identify your own anger-provoking behavior.
   Change your own anger-provoking behavior.
3. Role-play triggers + cues + anger reducer(s) + reminders + self-evaluation.
4. Review the Angry Behavior Cycle.

Week 8: Rehearsal of Full Sequence

1. Review the seventh session.
2. Introduce the use of Skillstreaming skills in place of aggression.
3. Role-play triggers + cues + anger reducer(s) + reminders + Skillstreaming skill + self-evaluation.

Week 9: Rehearsal of Full Sequence

1. Review the Hassle Logs.
2. Role-play triggers + cues + anger reducer(s) + reminders + Skillstreaming skill + self-evaluation.

Week 10: Overall Review

1. Review the Hassle Logs.
2. Recap anger control techniques.
3. Role-play triggers + cues + anger reducer(s) + reminders + Skillstreaming skill + self-evaluation.
4. Give reinforcement for participation and encourage trainees to continue.

Note: From *Aggression Replacement Training: A Comprehensive Intervention for Aggressive Youth*, pp. 81-82, by Goldstein et. al., 1998, Champaign, IL: Research Press. Reprinted with permission from the authors.

Appendix M: Moral Reasoning Problem Situations

Moral Reasoning Problem Situations

1. **Charlene's Problem Situation** promotes a more profound or mature understanding of friendship.

2. **Maria's Problem Situation** focuses on the problem of ending a dating relationship that is going nowhere.

3. **Julie's Problem Situation** focuses on the importance of trust in a friendship. How trustworthy is a friend who has a stealing problem?

4. **Alicia's Problem Situation** focuses on contending with a friend who has a stealing problem.

5. With **Gwynn's Problem Situation,** the stakes are raised with respect to the issue of dealing with an irresponsible friend.

6. **Linda's Problem Situation** focuses on dealing with a troublesome friend.

7. **Sarah's Problem Situation** focuses on contending with a friend who has a stealing problem.

8. **Jill's Problem Situation** focuses on contending with an irresponsible friend.

9. **Samantha's Problem Situation** focuses on whether or not it is right to tell on a friend.

10. **Regina's Problem Situation** focuses on whether or not it is right to tell on a parent.

Note: From *Aggression Replacement Training: A Comprehensive Intervention for Aggressive Youth*, pp. 295-324, by Goldstein et. al., 1998, Champaign, IL: Research Press. Adapted with permission from the authors.

Appendix N: Tables and Figures

Table 1

Participant and Population Demographics

	Age	
	Mean	Std. deviation
Participants		
Experimental	16.63	1.00
Comparison	17.07	.91
All	16.85	.97
Population		
Time 1	16.90	.92
Time 2	16.82	.97

Note. Age is expressed in years.

Table 1 (Continued)

Participant and Population Demographics

	Race/Ethnicity			
	Caucasian	African American	Latina	Mixed
Participants				
Experimental	33.3	10.0	5.0	1.7
Comparison	35.0	11.7	1.7	1.7
All	68.3	21.7	6.7	3.3
Population				
Time 1	67.0	22.4	7.0	3.6
Time 2	69.2	24.0	5.8	1.0

Note. Race/ethnicity is expressed in percentages.

Table 2

Participants' Diagnoses

Disorder type		No. participants diagnosed w/condition
	Disorders usually diagnosed in childhood	
312.82	Conduct disorder	30
314.00/1	Attention-deficit/hyperactivity disorder	5
313.81	Oppositional defiant disorder	3
315.9	Learning disorder nos	1
	Substance-related disorders	
304.80	Polysubstance dependence	23
305.20	Cannabis abuse	19
304.30	Cannabis dependence	11
305.00	Alcohol abuse	4
304.00	Opioid dependence	4
305.90	Other or unknown substance abuse	4
305.40	Sedative, hypnotic, or anxiolytic abuse	3
303.90	Alcohol dependence	2
305.60	Cocaine abuse	1
305.30	Hallucinogen abuse	1
305.50	Opioid abuse	1
304.10	Sedative, hypnotic, or anxiolytic dependence	1

Table 2 (Continued)

Participants' Diagnoses

Disorder type		No. participants diagnosed w/condition
	Mood, adjustment, and anxiety disorders	
309.28, .4	Adjustment disorders, mixed	16
309.81	Posttraumatic stress disorder	14
300.00	Anxiety disorder nos	4
296.90	Mood disorder nos	4
296.XX	Bipolar disorder, various episodes	3
311	Depressive disorder nos	1
300.02	Generalized anxiety disorder	1
	Other conditions	
V62.82	Bereavement	1
312.34	Intermittent explosive disorder	1
V61.21	Sexual abuse of a child	1

Table 3

Participants' Charges

Charge type	No. of participants with 1+ charge
Violation of probation	44
Larceny—petit theft	34
Battery	32
Larceny—grand theft	21
Burglary	16
Trespassing	9
Aggravated battery	8
Disorderly conduct	8
Fraud	7
Disturbing the peace	5
Weapon possession	5
Robbery without a firearm	4
Weapon offense	4
Dealing in stolen property	3
Obstruction of justice	2
Disorderly intoxication	1
Drug trafficking	1
Riot	1
Traffic violation	1

Table 4

Participants' Aggressive and Rule-Breaking Behaviors Outcome Statistics

Source	*df*	*F*	$\eta\rho^2$	*p*
Between Groups (*n* = 60)				
Aggressive behavior in the classroom	1	1.87	.03	.18
Error	58	(2.08)		
Rule-breaking behavior in the classroom	1	1.14	.02	.29
Error	58	(8.45)		
Aggressive behavior outside of the classroom	1	.06	.00	.80
Error	58	(1.28)		
Within Groups *(n* = 60)				
Aggressive behavior in the classroom	1	57.03	.50	.00
Group by time	1	.78	.01	.38
Error	58	(.51)		
Rule-breaking behavior in the classroom	1	55.79	.49	.00
Group by time	1	.21	.00	.65
Error	58	(4.02)		
Aggressive behavior outside of the classroom	1	15.28	.21	.00
Group by time	1	.26	.01	.61
Error	58	(.70)		

Note: Values enclosed in parentheses represent mean square errors.

Table 5

Participants' Mean Changes in Aggressive and Rule-Breaking Behaviors

	Mean	Std. deviation
Aggressive behavior in the classroom, pretest		
Treatment	2.65	1.40
No treatment	2.18	.94
Aggressive behavior in the classroom, posttest		
Treatment	1.56	1.12
No treatment	1.31	1.04
Rule-breaking behavior in the classroom, pretest		
Treatment	4.77	2.97
No treatment	4.03	3.24
Rule-breaking behavior in the classroom, posttest		
Treatment	1.87	1.89
No treatment	1.47	1.43

Table 5 (Continued)

Participants' Mean Changes in Aggressive and Rule-Breaking Behaviors

	Mean	Std. deviation
Aggressive behavior outside of the classroom, pretest		
Treatment	1.46	1.11
No treatment	1.44	1.02
Aggressive behavior outside of the classroom, posttest		
Treatment	0.79	0.93
No treatment	0.92	0.90

Table 6

Participants' Outcome Statistics, Controlling for Traumatic Distress

Source	*df*	*F*	$\eta\rho^2$	*p*
Between Groups (*n* = 60)				
Aggressive behavior in the classroom	1	1.56	.03	.22
Traumatic Distress Covariate	1	.01	.00	.92
Error	57	(2.12)		
Rule-breaking behavior in the classroom	1	2.71	.05	.11
Traumatic Distress Covariate	57	3.55	.06	.06
Error	57	(8.10)		
Aggressive behavior outside of the classroom	1	.08	.00	.78
Traumatic Distress Covariate	1	.02	.00	.88
Error	57	(1.30)		
Within Groups *(n* = 60)				
Aggressive behavior in the classroom	1	13.90	.20	.00
Traumatic Distress Covariate	1	.79	.01	.38
Time X Group	1	1.26	.02	.27
Error	57	(.51)		

Note: Values enclosed in parentheses represent mean square errors.

Table 6 (Continued)

Participants' Outcome Statistics, Controlling for Traumatic Distress

Source	*df*	*F*	$\eta\rho^2$	*p*
Within Groups (*n* = 60)				
Rule-breaking behavior in the classroom	1	12.62	.18	.00
Traumatic Distress Covariate	1	.55	.01	.46
Time X Group	1	.45	.01	.51
Error	57	(4.05)		
Aggressive behavior outside of the classroom	1	1.91	.03	.17
Traumatic Distress Covariate	1	.02	.00	.90
Time X Group	1	.19	.00	.66
Error	57	(.71)		

Note: Values enclosed in parentheses represent mean square errors.

Table 7

Experimental Group Members' Outcome Statistics Based on PTSD Diagnosis

Source	*df*	*F*	$\eta\rho^2$	*p*
Between Groups (*n* = 30)				
Aggressive behavior in the classroom	1	.57	.02	.46
Error	28	(2.71)		
Rule-breaking behavior in the classroom	1	.87	.03	.36
Error	28	(8.16)		
Aggressive behavior outside of the classroom	1	.10	.00	.75
Error	28	(1.56)		
Within Groups *(n* = 30)				
Aggressive behavior in the classroom	1	3.77	.12	.06
Time X Group	1	.10	.00	.75
Error	28	(.56)		
Rule-breaking behavior in the classroom	1	2.25	.07	.15
Time X Group	1	.00	.00	.96
Error	28	(4.41)		
Aggressive behavior outside of the classroom	1	1.13	.04	.30
Time X Group	1	.01	.00	.92
Error	28	(.61)		

Note: Values enclosed in parentheses represent mean square errors.

Table 8

Participants' Positive Behaviors Outcome Statistics

Source	Mean	Std. deviation
Positive behavior outside of the classroom, pretest		
Treatment (n = 30)	6.73	3.42
No treatment (n = 30)	9.17	3.38
Positive behavior outside of the classroom, posttest		
Treatment (n = 30)	9.90	3.08
No treatment (n = 30)	11.80	2.31

ANOVA summary	*df*	*F*	$\eta\rho^2$	*p*
Between Groups (n = 60)	1	9.76	.14	.00
Error	58	(14.43)		
Within Groups (n = 60)	1	55.31	.49	.00
Time X Group	1	.47	.01	.50
Error	58	(4.56)		

Note: Values enclosed in parentheses represent mean square errors.

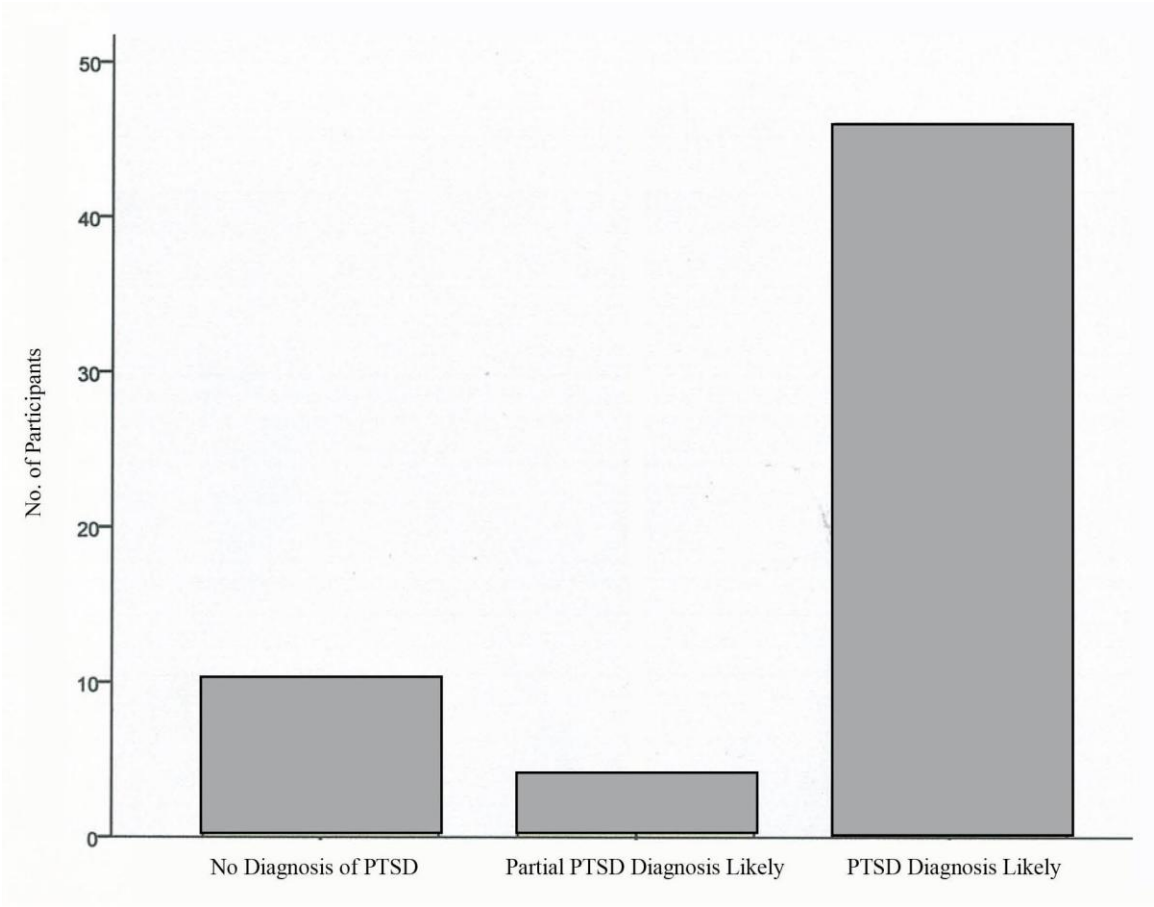


Figure 1. Participants' PTSD diagnosis.