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THE EFFECTIVENESS OF ANGER MANAGEMENT COUNSELING ON
RECIDIVISM RATES OF GANG-RELATED ADOLESCENTS IN
THE PROJECT BRIDGE PROGRAM

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Criminal Justice

by
Candace Kay Johnson

June 2007

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ABSTRACT

This study examines the effectiveness of anger management counseling on recidivism rates of gang-related adolescents in the Project BRIDGE (Building Resources for the Intervention and Deterrence of Gang Engagement) Program. The goal of the Project BRIDGE program is to reduce the incidence of youth gang violence, gang membership, and gang-related activities in the City of Riverside, California. Youth in the program are required to participate in a number of activities such as counseling, anger management, and substance abuse counseling. To explore the effectiveness of anger management programs this study explores the number of anger management contact minutes with the number of rearrest of the youth in the Project BRIDGE program.

It is hypothesized that adolescents who had anger management counseling will have lower recidivism rates than adolescents who did not have anger management counseling and that adolescents with more anger management counseling minutes will have lower recidivism rates than adolescents less anger management counseling minutes. It was also hypothesized that adolescents with more total program contact minutes will have lower recidivism rates than

adolescents with less total program contact minutes. Secondary data were used for this study. The data were obtained from the program's 2003-2004 and 2004-2005 fiscal year reports. The results indicate that anger management counseling is not effective in reducing recidivism rates for gang-related adolescents in the Project BRIDGE Program. Recidivism rates increased as participation in anger management counseling increased.

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DEDICATION

I dedicate this thesis to my children, Paul and NuKera Reddic. With the grace of God nothing is impossible; you can accomplish anything you set your mind to.

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CHAPTER ONE

INTRODUCTION

Violence is a reality to the adolescents of our nation. Herrmann and McWhirter (2003) suggest that over the last several decades violence has steadily increased among our nation's youth despite recent reports suggesting the opposite. They also report the arrest rates for violent juvenile crime between 1967 and 1997 increased by 143 percent. Children are taking weapons to school to kill classmates that made fun of them or bullied them. In the United States, homicide and suicide accounts for one fourth of deaths among youth age 10-24 years old (Journal of American Medical Association, 2004). Many things may cause adolescents to resort to violence. Zimmerman, Morrel-Samuel, Tarver, Rabiah, and White (2004) identified four categories of youth violence: individual factors, peer factors, family factors, and societal factors. The top cause of violence reported by the youth within these four categories was lack of anger management, the need for acceptance/peer pressure and harassment, parenting practices, and media violence.

Violence among adolescents appears to be an important factor that needs to be addressed. The main point is that adolescents get angry, leading to aggressive behaviors, such as violence (Kellner & Bry, 1999). When such behaviors take place and the adolescents get in trouble for it, they may end up in anger management class. Lench (2004) stated that diagnosing and treating individuals with anger problems has been an increasing concern to health organizations, clinicians, and society as a whole. He also states that there is a huge demand placed on therapists by the courts to treat angry people. Angry people can include any one from children to adults. This focus on anger has brought about the creation of anger management programs. Anger management programs teach individuals new methods of managing their anger in a positive way that will not constitute violence. These programs can be geared toward angry people in general or a specific population such as child abusers or adolescents.

Anger Defined

Anger is an emotion that involves interplay between environmental events, thoughts and physiological arousal. Both physiological and cognitive components are present in

an angry individual's mind. Anger is often classified as state or trait. State anger can fluctuate in intensity and presence and is usually linked with tension and annoyance. Thus, state anger comes and goes and the level of intensity can differ when annoyed or tense. Trait anger occurs when there is a consistent high level of state anger maintained over a period of time causing an individual to respond to anger-provoking situations in an angry manner (Swaffer & Hollin, 2001). Adolescents may experience anger at home or at school. Marion (1997) identifies some situations that may make an adolescent angry which are: conflict over possessions, physical assault, verbal conflict, rejection, and issues of compliance. Regardless of anger arousal classification, anger can be identified as healthy or unhealthy.

Healthy and unhealthy anger are differentiated by the response of an individual to a situation that makes them mad. For example, a waiter at a restaurant makes you mad by making a racial remark when he serves your food. In response to your angry emotional state you give the waiter a piece of your mind and report him to his manager. This is healthy anger because the situation was resolved positively. Now, if you threw your drink in the waiter's

face and punched him a few times, risking a case of assault, it would be identified as unhealthy anger because the resolution was negative. This example illustrates that anger can be expressed in many different ways, but an individual needs to control it. Therefore, it is important to explore the effect of anger management programs on adolescent violence. This study explores recidivism rates of gang-related adolescents newly enrolled in the Project BRIDGE Program who have participated in adolescent anger management counseling.

CHAPTER TWO
LITERATURE REVIEW

Theoretical Perspective

The general strain theory has been applied to delinquency in previous research (Aseltine, R., Gore, S., & Gordon J., 2004; Bao, Haas, & Pi, 2000). Past research found that strain causes delinquency. According to Agnew (1992) there are three types of strain. The first type of strain is the failure to achieve positively valued goals such as acceptance by peers, an active social life, and good school performance. The second type of strain occurs when there is a removal of positively valued stimuli from one's life. An example of this from an adolescent perspective is when they did not make the basketball team or their best friend moves away. The third source of strain results from the formation of negatively valued stimuli such as an abusive parent or criminal victimization.

The general strain theory also states that strain may cause the development of negative emotions. The negative emotion relative to this study is anger. Adolescents are experiencing strain that causes them to become angry. For

example, an adolescent is constantly physically abused by a group of his or her classmates and this makes him or her angry because he or she cannot stop it. He or she could not take the abuse anymore so he or she beat one of the group members with a bat. In this example, negative stimuli were present and it led to anger, which resulted in violence. Aseltine, Gore, and Gordon (2000) tested the use of the general strain theory for life stress, anger and anxiety, and delinquency. They found that anger management had a mediating impact on violent and aggressive acts. The three studies mention above illustrate that the general strain theory can be applied to angry adolescents.

Diagnostic and Treatment of Anger

A few studies addressed the effectiveness of treatment for anger. Beck and Fernandez (1998) found that cognitive-behavioral therapy is the treatment of choice for anger. Cognitive-behavioral therapy includes techniques that are strictly cognitive, purely behavioral and a combination of the two. Beck and Fernandez (1998) conducted a study to examine the efficacy of the three techniques mentioned above.

Each group was trained to self-manage anger either by cognitive techniques, behavioral techniques, or cognitive-behavioral techniques. The treatment began with a base phase in which the subjects self-monitored their anger, an intermediate phase in which self-management (the treatment) was superimposed upon self-monitoring, and a concluding phase in which treatment was taken away and the subjects returned to self-monitoring.

Beck and Fernandez (1998) found that the self-regulating model significantly alleviated anger. During phase 1, participants averaged five episodes of anger that lasted an average of one-and-a-half hours during which the mean peak of intensity reached 4.04 on a 10-point scale. These measures declined during phase 2 in which the treatment was given. Anger frequency declined by 57%, anger duration by 56%, and anger intensity by 21%. In phase three (no treatment) the measures remained relatively stable at an average of 1.59 anger episodes that averaged one-half-hour of duration and had a mean peak intensity of 3.23. It can be seen that frequency and duration of anger had the most pronounced changes. These findings indicate that the self-regulation model can be used as an effective approach to treatment of anger. All three techniques of

cognitive-behavioral therapy approaches share the basic components of relaxation and reinforcement; therefore, there was no significant difference between the techniques.

Lowenstein (2004) conducted a meta-analysis that examined research on work carried out between 1998-2003 on the cause of anger, associated features of anger, and diagnosis and treatment of anger. He found that most research indicated that there is a positive and negative aspect of anger. His study focused on both the negative and positive aspects of anger, diagnosis of anger, and treatment possibilities.

One positive aspect to anger pointed out by Lowenstein (2004) is that the sense of anger based on injustices can be a good thing. Two examples of this are the Civil Rights Movements and the Suffragette Movements. Anger and injustice was the motivator of these movements and these movements ended with a positive impact. There are number of negative aspects of anger. High blood pressure and heart rate, tension, frustration, anxiety, irritation, and violence are all negative aspects of anger.

Next, Lowenstein (2004) addressed diagnostic approaches to establishing anger and how to treat it. He found that there are a number of scales that diagnose

anger. The first anger scale is the Anger "Out" and Anger "In" Scale. This scale assessed anger expression. The second anger scale is the Navaco Anger Scale. This scale classifies an individual's anger as clinical or non-clinical. The third anger scale used to diagnosis anger is the Anger Management Scale (AMS). This scale is designed to assess very concrete and specific cognitions and behaviors that can increase or decrease anger in intimate partner relationships. Fourth, the Behavioral Anger Response Questionnaire identifies anger responses as "in" or "out". The scale put anger responses into two categories: internalized and externalized. Anger diagnostic scales should be chosen to fit the population being studied.

Lowenstein (2004) found that the best treatment depends upon the diagnosis of what is called for in treatment. Lowenstein's (2004) study identifies a number of treatments that were found to be effective. The first promising approach to treating anger is cognitive behavioral therapy. This finding is consistent with Beck and Fernandez (1998). During cognitive behavioral therapy one develops specific anger reducing skills that they seem to be lacking. The second effective treatment approach

mentioned by Lowenstein (2004) is cognitive relaxation of fantasy. With this treatment individuals learn to visualize a calm and relaxing scene when anger arises. Third, music is used to distract individuals from anger and helps them to relax. The fourth effective treatment approach is anger management treatment programs. Effective anger management treatments specified by Lowenstein (2004) are: conflict resolution group treatment for parents and adolescents, group therapy including emotional literacy, psycho-educational approaches, group cognitive-behavioral therapy, therapy using animals, play therapy, and rational-emotive therapy.

Lowenstein (2004) reports that anger management programs can have positive results if used early and long enough to prevent further expression of anger or internalized anger. This statement helps to identify that there is a need to test the length of anger management programs in terms of program duration. This study addresses the length of anger management programs by exploring the effects of anger management session minutes on recidivism rates.

Anger Management Programs

There is no definite date on when anger management programs were developed, but they began to appear across the country in the 1990's. Hollenhorst (1998) indicated that the need to control anger dates back to the ancient and medieval time period. The Stoics believed anger was useless even in war. Aristotle believed that anger arises from perceived injustice and that it had value in preventing injustice (Kemp & Strongman, 1995). The Stoic Philosophers also stated that the emotion of anger could be controlled and that self-control can be learned by training rational thought.

Currently, anger management programs have developed widely because there is a perceived need by our society for it (Hollenhorst, 1998). These programs were developed to teach people how to control their response to anger-provoking situations. Individuals that are violence-prone are usually the main targets of anger management programs, but these programs can be tailored to help anyone. For example, anger management has been taught in parenting class, daycare and elementary schools, the workplace, sports psychology and police training (Hollenhorst, 1998).

Anger management programs were established to prevent violence by changing offenders' perceptions, attitudes, and expectations that maintain antisocial behavior. Anger management can be helpful for anyone regardless of their temperament, but it is more than likely that these programs are designed to help those who are violent or have a behavior problem.

Program Effectiveness

School-Based Anger Management Meta-Analysis

Gansle (2005) conducted a meta-analysis on the effectiveness of school-based anger interventions and programs. Twenty peer-reviewed journal articles were included in the meta-analysis. The selection criteria is as follows: 1) all studies had to be published in English; 2) studies had to take place in a school setting; 3) all studies had to have children between the ages of five and 18 years as the primary focus of treatment; 4) all studies had to be published in peer-reviewed journals; 5) only experimental or quasi-experimental studies that evaluated the effect of an intervention on child behavior; 6) data presented in the study had to allow for calculation of an

effective size and had to include either means and standard deviations of control and experimental groups.

The results of this study yielded the following results. The twenty articles used were published between 1984 and 2003. In terms of school setting, 75 percent were in public school settings, 15 percent were in alternative schools, and 10 percent in a combination of public and alternative school settings. Elementary school-aged students were the participants for 35 percent of the articles, 50 percent of the studies used middle or high school students, and 15 percent of the articles used a combination of school-aged children.

Gansle (2005) also found that boys were the predominant group represented in the articles and only 12 percent of the articles reported having a majority of female participants. Only 46 percent of the articles used in the meta-analysis report ethnicity data for the participants. The majority of articles reported white samples followed by 43 percent African American samples. Entrance criteria for participants in the meta-analysis consisted of teacher nomination (30%), a test or rating scale score (15%), negative behavior according to school record review (10%), and special education placement (5%).

Most of the studies implementation of interventions was ran by a school psychologist or other school consultant or professional (55%), university faculty and their master and doctoral students (30%), and teachers (10%). Gansle (2005) reported that parental involvement as pretty low. It was found that parents were involved in some aspect of intervention delivery for 15 percent of all articles analyzed.

The mean treatment time for the studies was 134 minutes of duration, which was skewed by the presence of one outlier of 13,680 minute duration. In terms of the studies design, 80 percent of the articles use repeated measures with intervention and control groups, 15 percent used post-only interventions/control comparisons, and 5 percent used single group pre-post data. Twenty-five percent of the articles did not use random assigned treatment groups. Thirty percent randomly assigned participants and 45 percent randomly assigned by an existing group such as class or school. Intervention focus of these studies was either self-focused components, or socially focused components, or a combination of the two.

The most revealing findings of this meta-analysis were that the mean effect size for school interventions related

to reducing anger is .31. This finding indicates a difference of .31 standard deviations between treatment and control groups or pre- and post intervention outcomes. It was also found that the externalizing and anger interventions had the highest mean effect amongst the studies. Overall, this meta-analysis found that school-based anger interventions and programs are effective with the most effect amongst externalizing and anger interventions. Therefore, this meta-analysis suggests that anger management treatments in schools are similar in their effectiveness to other psychological and educational treatments. Also, treatments that are longer, more socially-focused, and include behavioral components are more likely to benefit students who risk their educational opportunities and achievements on the expression of externalizing behaviors and anger.

For future research Gansle (2005) suggested that researchers look at the weight of effect size by study quality. She also suggested that future studies routinely examining externalizing and anger behaviors as one of the outcomes and attempt to relate anger to other outcomes that are relevant to student success in schools.

Reduction in Aggressive Incidents

In the review of the literature on adolescent anger management programs it was found that these programs are effective in reducing aggressive incidents and effective in positively changing aggressive behavior. Studies that conclude that anger management programs are effective in reducing aggressive incidents will be addressed first.

Thomas & Smith (2004) found that anger management programs are effective in reducing students' tendencies to solve problems with physical or relational aggression. Thomas and Smith (2004) conducted a descriptive study on violent and non-violent American youth with an emphasis on school related factors. School connectedness usually emphasizes students' experience of caring at school and a sense of closeness to school personnel and environment (Thomas & Smith, 2004). This study identified differences between violent and non-violent youth on school connectedness.

The sample consisted of 282 American youth from 47 states and the District of Columbia. In terms of gender, 123 boys and 158 girls responded with one not stating their gender. The age range of respondents was 7 to 19 years, with a mean age of 15.3 years. The racial breakdown was

173 Whites, 29 African-American, 35 Hispanics, and 35 "Other" races. Most of the respondents were in grades 8 through 12. Respondents were categorized in two groups, violent and non-violent. The "violent" group consisted of those who had been expelled from school for fighting or bringing a weapon and/or has been charged with a violent offense by the juvenile justice system (n = 82). The "non-violent" group consisted of those who did not fit into the "violent" group (n = 200).

Thomas and Smith (2004) found that violent youth often feel loneliness and alienation from their classmates. To help address this problem Thomas and Smith (2004) suggested that interventions that increase social competence and connectedness of alienated students are needed. It was also found that participants decried the repressive and prison like atmosphere in their schools. The participants also held strong negative views of "zero tolerance" policies and disproportionate punishments. Schools with punitive atmospheres do not promote school connectedness and does not promote a positive school climate for learning. Thomas and Smith (2004) suggests creating support programs for isolated students and a positive, accepting school climate are more likely to decrease hatred

of school and angry acting out behavior. It is well known that victimization is a predictor to future violence, the authors' state that reducing victimization is one way to reduce youth violence. Thomas and Smith (2004) suggest that anger management programs be tailored to specific subgroups, based on gender and/or race may be beneficial.

Kellner and Bry (1999) found that aggressive incidents decreased or stayed the same after anger management participation for emotionally disturbed students. Kellner and Bry (1999) examined the impact of providing anger management training to small groups of adolescents in day schools for emotionally disturbed adolescents. The sample for this study was rather small (n = 7). The groups were composed of students with both mild and severe anger control difficulties. The anger management program for these emotionally disturbed adolescents was a 10-week program. The program emphasized helping the adolescents understand that anger is a normal feeling that must be dealt with in an acceptable manner.

Kellner and Bry (1999) stated three hypotheses. The first is that after participation in the anger management group students would receive improved conduct scores on the Conners Teacher Rating Scale (from their teachers).

Second, after participation in the anger management group students would receive improved conduct scores from their parents. Third, after participation in the anger management group the number of incidents of physical aggression would decrease. The research revealed that students improved on all three measures as hypothesized by Kellner and Bry (1999). The measures given to the teachers and parents six months after the program ended reported the students' scores either improved or stayed the same. These findings support the authors' hypotheses and shows that this program was successful.

Willner, Brace and Phillips (2005) also saw a reduction in aggressive incidents. It was found that the frequency of anger incidents decreased over the course of the study for individual with intellectual disabilities. Willner et al. (2005) researched the Profile of Anger Coping Skills (PACS). PACS is designed to identify the anger coping skills that individuals with intellectual disabilities (IDs) actually use in their daily life. The authors conducted a nonrandomized controlled evaluation of a 12-week anger management course. PACS was used as part of the assessment pack administered before and after the intervention.

The sample consisted of 20 day service users that were diagnosed with IDs. The sample was non-randomly assigned into two teams, those who used the day service for educational and leisure activities and those who used the day service to engage in horticultural work. The two teams of day service users were subjected to different demands. There was a control group and a treatment group.

A number of findings came out in the analysis of this study. One, the control group showed a tendency to be more angry, prior to treatment, particularly on staff ratings. But, key workers' rating of anger decreased substantially at post-treatment for the treated group and gains observed at post-treatment were maintained at 6-month follow-up. The intervention effect was nonsignificant at the post-treatment evaluation [$t(15) = 1.06$], but a larger, and significant, difference between the two groups was seen at the 6-months follow-up [$t(15) = 3.21, p < .001$]. Two, the intervention significantly increased anger coping skills. It was found that the treated group were significantly less skilled than the control group prior to treatment [$t(15) = 2.35, p < .05$], but were significantly more skilled after treatment [$t(15) = 2.59, p < 0.05$] and at follow-up [$t(15) = 3.53, p < 0.01$]. Three, the profiles of coping with

anger skills for the treated group as a whole revealed that prior to treatment the only skills used to any extent by participants was asking for help, cognitive restructuring, and assertiveness. At follow-up, two of these improvements were maintained for help and assertiveness.

The results show the effectiveness of a cognitive-behavioral anger intervention which is consistent with prior research. The results also indicated that anger management is effective when used for people with intellectual disabilities. A correlation between improvement in anger post-treatment and receptive language ability was sound. Willner et al. (2005) study also revealed that PACS can be used to inform not only the design of future group interventions, but also the development of individual care plans.

Williams (2002) findings are consistent with the previous studies; it was found that there was a reduction in the number of everyday fights that resulted from disrespect. Williams (2002) conducted a study that examined the effectiveness of anger management training and curricular infusion at an alternative school for students expelled for weapons. The sample consisted of 43 students at pretest and 41 students (11 of who had completed the

pretest) at posttest. The students were administered the National School Crime and Safety Survey. Pretest and posttest surveys were used in conjunction with other contextual data collected.

Williams (2002) reported a number of pretest and posttest results. One, at pretest 39.5% of students reported that they could keep from getting very angry whereas, 51.7% of students at posttest reported the same thing. This finding indicates that the students thought they had become better able to handle their anger since they came to the alternative school. Two, (60.7%) of the students revealed that they had become better able to deal with conflicts with their friends, acquaintances, and family without becoming violent since they came to the alternative school. Three, (64%) of students at pretest agreed or strongly agreed with the statement that "they would get into a fight if someone disrespected them" compared to 14.7% of students at posttest. This finding demonstrates a significant reduction in the number of students who reported a willingness to fight because they were disrespect ($M = 1.17$), $t(30) = 5.484$, $p < .01$. The program was successful in accomplishing two out of its three goals. The two goals accomplished was the

improvement in the students' ability to manage their anger and the reduction in the number of everyday student fights that resulted from disrespect. The third program goal that was not accomplished was reducing the number of students who felt disrespected by school staff.

The staff at the alternative school for weapons also completed a posttest survey about their experiences in the school and their perceptions on the interventions. The results are as follows. A total of 16 school staff, teacher and administrators were given the survey at the conclusion of the first year of the intervention. It was found that most teachers prior to the intervention complained that students rarely treated adults in the school with respect. At the end of the first year of intervention only 13.3% of the staff agreed with the statement "students rarely treated school personnel with respect." Also, 90% of the staff reported that they were moderately to highly satisfied with the violence prevention (direct anger management and staff training). Ninety-three percent of the staff felt that violence prevention knowledge among student participants' improved and 73% felt knowledge among student participants' in the anger management had improved. All staff members said that they

would recommend the intervention to other schools. All these positive staff ratings of the school and intervention indicate that during the first year of intervention there was a dramatic improvement.

Williams (2002) concludes with the notion that teaching anger management skills to students and reinforcing them within classrooms (through curriculum infusion) and school sites is effective. Students at the highest risk of violent behavior in schools can learn and use strategies that will reduce violence in school. The staff felt better about the school environment and how students behaved toward them and toward each other than they did prior to the interviews. The results of this study suggest that direct anger management training combined with infusion of skills within the traditional circular can have a positive impact.

Changing Angry Behavior

Hornsveld (2005) found that anger management had a positive effect on aggressive behavior. He concluded that Aggression Control Therapy resulted in a reduction of reported aggressive behavior of psychiatric inpatients. Hornsveld's (2005) exploratory study dealt with the evaluation of Aggression Control Therapy for violent

forensic psychiatric patients. The evaluation was carried out with 109 forensic psychiatric inpatients and 44 forensic psychiatric outpatients, all males. The inpatients were inmates at five hospitals and had been convicted of a serious violent crime. Their average age was 32.5 years (range: 21-51 years). The sample participants were diagnosed with an axis II antisocial personality disorder or an axis I psychotic disorder in combination with and axis II antisocial personality disorder. The outpatients on the other hand, were treated at two forensic clinics as a result of treatment prescribed by the court for violent offenses. The average age of the outpatients was 23.4 years (range 16-47 years). The outpatients were diagnosed with an axis I conduct disorder or an axis II antisocial personality disorder.

Hornsveld (2005) analyzed differences in pre-measures between those who completed the therapy and those who dropped out. It was found that participants who were absent for more than two sessions without a legitimate excuse or who were not allowed to continue in the therapy due to their constantly provocative behavior were more likely to be dropouts. Eighty-eight of the inpatients completed the therapy and 12% dropped out whereas 66% of

the outpatient completed and 34% dropped out. Dropouts scored significantly lower on the personality trait of agreeableness and higher on the problem behaviors of hostility and aggression; they also scored lower on social anxiety and higher on social skills. Hornsveld (2005) also compared the PCL-R scores of completers and dropouts in the inpatient and outpatient. There was no difference in the PCL-R scores between inpatients who completed the therapy and those who dropped out. A difference was found in the outpatient group scores: dropouts scored significantly higher on the PCL-R than patients who completed the therapy.

The scores on the self-report questionnaires at pre-measurement, post measurement and follow-up measurements were analyzed. The data concern pre-measures of 153 patients (109 inpatients and 44 outpatients), post-measures of 104 patients (79 inpatients and 25 outpatients) and follow-up measures of 49 patients (33 inpatients and 16 outpatients). A significant decrease in reported hostility and aggressive behavior could be observed in a comparison of pre and post measures. This decrease was still apparent at the follow-up measurement. There were no significant differences perceived in reported social anxiety or social

skills. Another analysis was performed to find an explanation for the lack of significant differences between pre and post measures of social anxiety and social skills. For this, scores on the IOA sub-scales of patients who completed the therapy were compared with those of a norm group. It was found that forensic psychiatric patients appear to consider themselves as less anxious and more socially skillful than a norm group. However, they report problems with specific behaviors such as giving criticism (too often) and giving compliments to others (too seldom).

The author also analyzed which patients benefited most from therapy. The difference scores for aggressive behavior and for social behavior were correlated with personality traits and age for the patients with available pre and post measures. It was found that the patients with relatively high scores on disposition to anger seemed to have benefited from the therapy. They showed the greatest decrease in aggressive behavior. The reduction in aggressive behavior was not related to anger. Based on the questionnaires, a decrease in social anxiety and an increase in social skills were indiscernible. Hornsveld (2005) concludes with the notion the Aggression Control Therapy seems to have resulted in a reduction of reported

hostility and aggressive behavior in the total group of forensic psychiatric patients, not only after completion of treatment but also at follow-up.

Presley and Hughes (2000) found some behavior change in response to naturally occurring anger-provoking situations in everyday school settings. The purpose of Presley and Hughes (2000) study was to evaluate the effects of a peer-delivered social skills program designed to teach high school students with behavioral disorder (BD) in a general education setting to express anger appropriately. The sample consisted of four high school students enrolled in a class for students with BD located on a general education high school campus in a large metropolitan school district. The class for students with BD was attended by 10 students (8 young men and 2 young women). The general education students who were enrolled in a one-credit "peer buddy" course volunteered to teach the anger control strategy to the students with BD.

The first participants name is Kevin, a 14 year-old African American in the 9th grade that was diagnosed as having BD and mild mental retardation. Pre-baseline observation revealed that he frequently engaged in name calling and verbal aggression with peers, in addition to

periodic physical aggression. Kevin has been enrolled in BD for the past 6 years. The second participant is Mike, a 14-year old African American in the 9th grade that was diagnosed with having BD and a learning disability. Mike has been in classrooms for students with BD since the fourth grade because of high rates of physical and verbal aggression toward peers and teachers and his lack of interpersonal relationships.

The third participant is James, a 15 year old African American in the 10th grade. He also was identified to have BD. Pre-baseline observation indicated that James often failed to follow verbal directions, frequently had verbal outbursts and episodes of physical aggression, and often interacted inappropriately with individuals who had authority. The fourth and last participant was a 17-year old Caucasian woman in the 12th grade named Susan. Susan has been diagnosed with BD and a learning disability. Susan was often verbally or physically aggressive in response to assumed threats or insults by peers or adults. Observations also indicated that she often appeared sad or unenthusiastic, became angry in response to constructive criticism and adapted poorly to change in daily activities.

It was found that during baseline no student completed more than two of the 11 steps of the Triple A Strategy for expressing anger appropriately during any session after peer-delivered social skills instruction was introduced, all participants demonstrated increases in the number of anger expression steps performed independently. Criterion performance (80% of the steps completed independently for three consecutive sessions) was obtained following 9, 10, 8, and 6 instruction sessions for Kevin, James, Susan, and Mike. During follow-up, participants maintained performance at 10 or 11 steps completed independently per session after instruction was withdrawn.

The number of anger-provoking incidents that occurred naturally outside the instructional situation was reported. Participants were observed to respond appropriately or inappropriately. During the 9 week intervention a total of 30 incidents were observed. Students were involved in a total of 13 incidents during baseline, 9 during instruction, and 8 during follow-up. Kevin and Susan decreased their rates of responding observably to anger-provoking incidents across the study. James and Mike decreased their rates during follow-up. The BD classroom teachers' and educational assistants' rated the

effectiveness of the anger control instructional program and they generally disagreed that the program was effective in changing the way in which participants responded to anger-provoking situations, with exception of one participant (Kevin). The comments from the respondents indicated that they believed the program had potential, but more instruction was needed to show improvement.

These results are an indication of some behavior change in response to naturally occurring anger-provoking situations in everyday school settings. General education peers as trainers and participants in role-playing scenarios in this study were effective at teaching students to perform steps of an anger management strategy

As with Presley and Hughes (2000), Fleming, Barner, Hudson and Rosignon-Carmouche (2000) also found some positive behavior change. They found that the anger management program helped better self-expression and trust. Fleming, Barner, Hudson, and Rosignon-Carmouche (2000) designed a study that explored neglected relationships among anger, violence, and academic performance in a sample of troubled teens. The authors' hypothesized that (a) anger management would be positively correlated with violent behaviors; (b) violent behavior would be negatively

correlated with academic performance; (c) academic performance would be associated with positive relationships with parents and teachers, as well as with proactive management behaviors.

The sample consisted for 40 troubled students from Thomas Jefferson High School that participated in The New York Youth at Risk (NYEAR) program. The NYEAR program is an interactive intervention to confront students with their maladaptive behavior in the presence of peers and adult mentors, or committed partners. This program stresses emotional confrontation and support for behavior change. The participants were followed up to 6 months after the intervention. Of the 40 students, only 19 were located to complete the evaluation instruments. Thirty-two percent of the sample was male and 68% were female. The ethnic breakdown indicates that 68% were African American and 32% were Latino. Students were in the 10th through 12th grades, and ranged in age from 15 to 18.

The students were measured on three modes of expression: anger-in (keeping to yourself), anger-out (taking it out on others), anger-discuss (the constructive mode). Fleming et al. (2000) observed intercorrelations among the independent measures. Then each series of

independent variables was correlated with the dependent measures, background measures, and program evaluation variables. Two significant differences were found among the independent variables: (1) females scored higher on anger-out ($F = 5.51, p < .05$) and (2) Latinos scored higher on the number of verbal fights reported in past year ($F = 4.292, p = .05$).

There were three significant differences among the major dependent variables. First, males tended to score higher on the total self-concept scale but not on any of the subscales ($F = 3.59, p < .10$). Second, males also scored higher on the Proactive Management 1, or management of time and concentration scale ($F = 4.19, p = .05$). Third, African-American students scored higher on the Mother-Interactions Scale ($F = 7.53, p < .05$).

It was found that anger measures were unrelated to violence measures or academic performance measures, and vice versa. Anger-in and anger-out tended to be positively correlated ($r = .407, p < .10$). Anger-discuss was negatively correlated with reporting that the influence of the program was self-expression and communication ($r = -.495, p < .05$). Anger-in was significantly correlated with five variables: negatively with the goal-directed focus;

family problems leading to the NYEAR program; the program's food; having a part-time job; and negatively with the Time and Concentration Scale. These findings suggest that anger-in is associated with a lack of concern with goal direction and time and concentration, but is preoccupied with family problems, job and food. It also appears that anger-out is unrelated to violence measures, but it is related to self-described tendency to get into fights and arguments with friends. Verbal fights were associated with poor relationships with the mother, but that changed toward better self-expression and trust as the result of mentoring. It also appears that verbal fighting is linked to a prior difficulty with communication, and pregnancy may also serve as an immature means of self-expression. Fist fights were linked to a general lack of goal direction and a specific lack of desire to go to college.

In terms of academic performance, the results appear to suggest that higher preprogram GPA appears to be linked to a restlessness in class, a general lack of involvement, and a perceived lack of control over opportunities of one's personality. Higher post-program GPA is negatively associated with eight significant variables: father's years of education; joy in blackness; thinking about how to make

the best use of time; the total self-concept scale; the teacher support scale; and spending a lot of time with mother outside the home. It was also found that different individuals were performing best in school before and after the program.

All of these findings reveal that anger mismanagement was largely unrelated to violence or to academic underachievement. Instead, loss of control over time, concentration, and future direction were keys to these maladaptive behaviors. Teenagers higher in anger-out benefited less from the programs goal-directed focus.

Hemphill and Littlefield (2001) also found behavior changes in their sample. It was found that anger management was effective in producing statistically significant changes in the children's behavior problems. Hemphill and Littlefield (2001) designed a study to evaluate the effectiveness of a multicomponent treatment program, Exploring Together (ET), for childhood behavioral and emotional problems. Their focus was on the changes in children's behavior following participation in Exploring Together. It was hypothesized that the behavior problems of the children who attended ET would show significant decreases at home and at school at the end of the ET

treatment program compared with an untreated, waiting-list control group, and that changes at home would be maintained at 6- and 12-month follow-up. They also hypothesized that the social skills of children who completed ET would improve at home by the end of ET and that these changes would also be maintained at 6- and 12-month follow-up.

The sample consisted of 145 children and their primary caregivers. The sample was broken up into two groups, those who completed ET (the treatment group, n = 106; 85 boys, 21 girls) and those who did not receive ET but were on a waiting-list for treatment (untreated, waiting list control group, n = 39; 29 boys, 10 girls). The treatment group children ranged in age from 5 to 14 years and the control group was 5-13 years old.

The results are as follows. In terms of the level of children's behavior problems it was found that more than half of the treatment and control group children scored in the borderline clinical range or higher on both externalizing and internalizing behavior at home measure. It was also found that 46% of treatment group children and 33% of control group children were in the borderline clinical range or higher on both externalizing and internalizing behavior at school. An additional 11% of

treatment group children and 19% of control group children showed externalizing behavior problem (EBP) at home only, whereas approximately 20% of treatment and control group children showed EBP at school only. These findings indicated that most of the children who participated in this study seemed to have clinically significant levels of behavior problems.

The number of participant's decreased during the analysis between pre-treatment and 6-month follow-up. Fifty-eight percent of the original sample was available at 6-month follow-up. It was also found that the mean scores on both the externalizing and internalizing scales significantly decreased (improved) from pre-treatment to post-treatment. The children's scores on the internalizing scale continued to improve somewhat from pre-treatment to 6-month follow-up, whereas gains on the externalizing scale at post-treatment seemed to be maintained at 6-month follow-up. Hemphill and Littlefield (2001) findings suggest that improvement achieved by the end of ET were maintained at 6-month follow-up.

Twelve-month follow-up data was available for 45% of the treatment group. The results revealed a statistically significant difference. There were also statistically

significant decreases in mean scores on both the externalizing and internalizing scales from pre-treatment to post-treatment. There were some statistically significant improvements in mean scores of the 12-month follow-up completers on the internalizing scale between post-treatment and 6-month follow-up, but no statistically significant changes in scores on the externalizing scale between post-treatment and 6-month follow-up, nor were there any statistically significant on either the internalizing or externalizing scales between 6- to 12-month follow-up. These findings between pre-treatment to 12-month follow-up suggest that ET is effective in reducing children's externalizing and internalizing behaviors from pre- to post-treatment with the children's behavior improving further for up to 6-months after the program. The changes in the children's externalizing and internalizing behaviors were maintained at 12-month follow-up.

Hemphill and Littlefield (2001) also investigated the clinical significance of changes in children's behavior. It was found that ET was effective in producing clinically significant changes in some children's behavior problems and social skills at home from pre- to post-treatment.

From pre-treatment to 6-month follow-up it was found that ET continued to have a clinically significant impact on the children's behavior problem and social behaviors up to 6 months after completion of the program. As for pre-treatment to 12-month follow-up the clinically significant gains in children's behaviors seemed to be maintained. At both 6-month and 12-month follow-up there were no longer any children in the clinical range of the social scale and at least 60% of children in the borderline clinical range, showed improvements at post-treatment and at 6- to 12-month follow-up.

The program evaluated in this study, Exploring Together, produced statistically significant reductions at the end of the program. The program moved some children's behavior problems and prosocial behaviors at home to within the normal range. Therefore, ET was effective in producing statistically and clinically significant changes in the children's behavior problems and social skills at home and the maintenance of many of these changes at 6- and 12-month follow-up. Anger management was not the main focus of this program, it was a component. The results of this study indicate that ET was effective in changing children's behavior problems which suggests that the anger management

component had some influence on the changes of the participants' behavior.

The behavior change that Humphrey and Brooks (2006) found was in anger control. The anger management program in this study was effective in helping young people understand and control their anger. Humphrey and Brooks (2006) conducted an evaluation of a short cognitive-behavioral anger management intervention for pupils at risk of exclusion. The aim of this study was to evaluate the effectiveness of a short cognitive-behavioral anger management intervention in reducing problem behaviors in school, and to identify factors that may facilitate or impede participant progress in the program. Humphrey and Brooks (2006) evaluated two research questions. Is a short cognitive-behavioral anger management intervention effective in reducing problem behaviors in a group of pupils at risk of exclusion and what factors facilitate or impede the progress of pupils in the program?

The sample consisted of 12 young people between the ages 13 and 14, who were sampled purposively from among the general school population. Of the 12 participants, four were girls and eight were boys. All four girls were of Black British origin, with two boys being African, three

Black British and three White British. The number of black participants selected for this intervention was disproportionate to the percentage of black students in the year group and the institution as a whole.

The researchers analyzed their data in different sets. The first set of data was related to the measures of problem behaviors taken using the RRTS. The second set of data was drawn from the observations and interviews. The RRTS measure resulted in the following findings. First, the greatest area of concern amongst the teacher's ratings was behavior conduct. This finding is in sync with the sampling process and adds to the population validity of the sample. Second, for all domains of the RRTS, the baseline period is characterized by a small increase of scores, which were reduced during the intervention period and rose back to original levels during the follow-up period. Third, a significant main effect for the prosocial scores was found. These findings indicated a stable baseline period followed by a significant increase in prosocial behaviors during the intervention period. This effect was sustained at follow-up. Fourth, there was no significant main effect for the inattentive/hyperactive scores. Fifth, the possibility of time x domain interaction for conduct

and emotional scores was investigated and it revealed that there were no significant main effect of time, $F(3,33) = 1.67, p > .05$, but a significant main effect was found for domain, $F(2, 22) = 14.12, p < .001$.

The qualitative analysis revealed that power is a central and overarching theme throughout the analysis and has influenced a range of factors that have impacted on the effectiveness of the intervention. It was found that power issues impacted strongly on cultural influences and life scripts that affect how young people in the sample responded to anger triggers. It was also found that the issues of power produced differences in the extent to which the male and female participants felt about sharing their experiences. Treatment readiness was raised as an issue because it impacted the motivation of the young people in the group. All the findings of Humphrey and Brooks (2006) suggest that short cognitive-behavioral anger management programs can be effective in helping young people understand and control their anger. The average effect size (Cohen's d) for this study is 0.505. The findings also indicate that this type of intervention (short-term) can be implemented successfully in mainstream school settings.

As in the above study, Snyder, Kymissis, and Kessler (1999) found that anger control increased after completion of anger management. Snyder et al. (1999) investigated the efficacy of an anger and aggression reducing intervention for an adolescent psychiatric inpatient population. The sample consisted of 50 adolescent patients, male and female, selected from a New York county psychiatric hospital unit. They were known to have disruptive behavior disorder and high levels of anger. In this study, the treatment was the Anger Management Group Training series and the control condition was a series of psychoeducational videotapes.

Snyder et al. (1999) came up with three hypotheses: (1) Subjects who received the anger management treatment were expected to self-report significantly less anger at the post-treatment phase, compared with their own pretreatment scores and compared with the post-treatment self-reports of control subjects; (2) subjects who received the anger management treatment series would not only benefit from the treatment, according to their self-report measures, but also they would generalize their skills into broader social settings; (3) subjects who received the anger management treatment would maintain their skills

better in the 4 to 6 week follow-up phase. It was found that the experimental group's scores decreased significantly from pre- to post-treatment measurements, whereas the control group's scores increased slightly from pre- to post-treatment. It was also found the adult caretakers rated treatment subjects' behavior less disruptive than the control subjects in the post-treatment phase. The findings of this study indicate that the experimental subjects' anger control improved after treatment.

The results showed that the treatment group improved and the control group did not improve. Unexpectedly, the control group's scores at post-test increased slightly, causing the distance of post-intervention scores to increase. Therefore, the experimental group's behavior changed for the better after participation in the program.

Herrmann and McWhirter (2003) found that anger management was effective in changing the children's aggressive attitudes and adjusting their anger management style. Herrmann and McWhirter (2003) examined the internal validity of the SCARE program. SCARE is an anger and aggression management program geared towards high school students. The sample was based upon seventh, eighth, and

ninth grade students from two alternative middle schools in central Arizona who were academically and behaviorally at-risk. Two hundred and seven students, both male and female, were randomly selected from the alternative middle schools. Students were randomly assigned into treatment and control groups. The treatment group received the SCARE curriculum and the control group received the Enter Here curriculum.

Herrmann and McWhirter (2003) investigated the empirical question, "In what ways do adolescents who have completed the SCARE program differ from other adolescents in terms of anger and aggression levels?" It was found that students in the treatment program who received the SCARE curriculum had significantly lower levels at post-test on the STAXI measure when compared to the control group. It was also found that students in the treatment program had significantly less aggressive attitudes on the AGVQ at post-test when compared to the control group. The students in the SCARE program felt less angry and made adjustments to their own anger management style after the program was administered. Students did not maintain their anger-related treatment gains after one year had passed

since treatment. The authors were able to support the SCARE program as scientifically valid.

In terms of behavior change, the children in Sharp and McCallum's (2005) sample learned to think rationally and their knowledge of anger management skills increased. A formal investigation and evaluation was conducted on an anger management program that uses Rational Emotive Behavioral Therapy (REBT) based group activities for rural middle school children in a general school setting. The purpose of their study is to determine the utility of such a program for rural middle school children. REBT is a specific type of cognitive-behavioral therapy that focuses more on behaviors and specifically addressed anger development. Sharp and McCallum (2005) designed their study to address the utility of a training program that is characterized as including an anger management component, specific REBT-based training, a rural middle school population, group intervention, and children in a general school setting.

In terms of sample characteristics, the participants included 16 students from a middle school in a southeastern state that were within a "rural" community. The sample consisted of eleven males and five females. Ages ranged

from 12 to 15 years old. The average age was 13.5 years and the standard deviation was 9.01 months. In terms of ethnicity, there were two African-Americans in the seventh grade group and one in the eighth grade group, all other participants were Caucasian. A waiting control design with control versus experimental group comparison was employed to increase the rigor of the subsequent analysis. Both groups participated in the same training program. The second group served as the waiting control.

It was found that there were no significant differences between the pre-test scores of the two groups. Sharp and McCallum (2005) found that the REBT-based anger management intervention produced significant gain in knowledge of REBT principles and anger management strategies. Paired t tests indicated that there was a significant increase from pre-test to post-test for the whole sample [$t(15) = -9.01, p < .001$]. Significant increases were also noted from pre-test to follow-up for the overall sample [$t(15) = -3.35, p < .01$]. Office referrals were used as a dependent measure in a repeated ANOVA. The results indicated that there was no significant difference among the office referral means across the three time periods for the overall sample [$F(2, 30) = 1.43, p > .$

05]. A follow-up analysis was conducted on office referrals to determine effect size and the analysis revealed a moderate effect for all participants from baseline to follow-up (.63). There was a moderate to large effect for seventh graders from intervention to follow-up (.71) and eighth graders from intervention to follow-up (.72).

Weekly anger-inducing scenarios were tallied to determine if rational responses increased over the intervention phase. It was found that the level of rationality of thoughts remained stable for the overall group and that their stated level of rationality of actions increased. Results also indicated that the seventh graders increased in both rational thinking and reported actions and that the eighth graders decreased in their level of rational thoughts, but their stated level of rational actions increased.

Sharp and McCallum's (2005) overall results of this study indicates that the REBT-based program was effective in significantly increasing the participants' knowledge of REBT concepts, decreasing their number of office referral, and increasing their stated level of rational actions. In the participants' analysis of the program they stated the

program taught them to how to control their thinking. The results of this study suggest that the REBT-based anger management intervention has promise in teaching children with a history of angry behaviors how to think and act more rationally by using the concepts of rational-emotive behavior therapy

Improved scores on anger measures for young male offenders in Ireland's (2004) study is an indication that anger management was effective in changing angry behavior. Ireland (2004) conducted a study on the effectiveness of a brief group-based anger management intervention with young male offenders. The sample consisted of 87 prisoners, with 50 belonging to the experimental group and 37 belonging to the control group. The experimental group received treatment for anger and the control group was awaiting treatment.

Ireland (2004) hypothesized that the experimental group would show significant improvements in anger measures following the intervention in comparison to pre-scores. She also hypothesized that no such change would be observed between pre- and post-measures for the control group. It is important to note that this program was short-term and group-based. Based on Ireland's (2004) findings it appears

that the experimental group benefited from the treatment. Ninety-two percent of prisoners in the experimental group showed improvement on at least one of the measures. Forty-eight percent improved on measures, 35 percent improved on the AMA (Anger Management Assessment Questionnaire), and 17 percent improved on the WBC (Wing Behavior Checklist). The control group did not exhibit any differences in the pre- and post- measures. The author's hypotheses were supported by the findings.

Ineffective Anger Management Programs

There were three studies that concluded that anger management did not work for their sample population. The first study is Hornsveld and De Kruijk (2005); they found that anger management was not effective for sexually violent psychiatric patients. Hornsveld and De Kruijk (2005) conducted a study that allowed them to gain greater insight into the personality characteristics and problem behaviors of Dutch sexually violent forensic psychiatric outpatients and non-sexually violent outpatients. In comparison with the group of non-sexually violent outpatients, it was assumed that the group of sexually violent outpatients would score higher on neuroticism and agreeableness and lower on extraversion and report less

aggressive behavior, more social anxiety and fewer social skills than the group of non-sexually violent outpatients.

The study was conducted on 105 sexually and 69 non-sexually violent outpatients (all male), who were required to undergo treatment. The non-sexually violent outpatients participated in Aggression Control Therapy for violent psychiatric patients. The average age of the non-sexually violent outpatients was 23.4 years (range: 16-47 years). Adult sexually violent outpatients participated in the Treatment Program for Sexual Offenders and juvenile sexually violent outpatients in the treatment program for Juvenile Sexual Offenders. The average age of the sexually violent outpatients was 40.5 years (range: 16-76 years). They committed abuse and rape of children or adolescents (43.9%), rape of adults (5.2%), hands-off offenses (4.6%), sexual abuse of adults (1.7%), or were suffering from sexual obsession (5.2%).

The average scores of the patient groups studied were compared with the average scores of the norm groups using one-sample t-tests. The total group of violent outpatients was compared to the norm group and it was found that all outpatients scored significantly higher on the neuroticism personality domain, lower on the agreeableness and

conscientiousness domains and higher on disposition to anger in comparison with the norm groups. The authors' assumption that sexually violent outpatients would also score lower on extraversion in comparison with the norm group was not supported. Neither did the sexually violent outpatient group score differently from the norm group on disposition to become angry. The outpatients did score higher than the norm group on social anxiety, but they did not report fewer social skills.

It was found that the age of sexually violent outpatients who completed the questionnaires differed significantly from that of the non-sexually violent outpatients. Therefore, ANOVAs were used to correct for age to compare averages on assessment instruments between groups. After correction for age, sexually violent outpatients differed significantly on several measures from non-sexually violent outpatients. The group of sexually violent outpatients scored higher on the domains of neuroticism and agreeableness and lower on anger as a trait than the group of non-sexually violent outpatients. The sexually violent outpatients also scored significantly lower on hostile and aggressive behavior on all measures and reported more favorably on their ability to cope with

emotions than non-sexually violent outpatients. Concerning the risk of recidivism it appeared that the average scores on the Static-99 for the outpatient sex offender group was a "low average".

The results of this study reveal that sexually violent outpatients are not more disposed to becoming angry than the general population but have more social anxiety in social situations. Hornsveld and De Kruijk (2005) suggest that anger management need not be a major element of treatment programs for sexually violent outpatients with a "low average" risk of recidivism. They recommend that this type of program should include social skills training, focusing relatively more attention on reducing social anxiety than on extending social skills.

The second study that concluded that anger management does not work is Leenaars (2005). Leenaars (2005) conducted a qualitative study on violent females, examining their aggressive behavior and describing experiences with Emotion Control Therapy (ECT). Emotion Control Therapy is an adaptation of the Dutch version of Goldstein's Aggression Replacement Training. To compare violent females and violent males, the author used data collected the previous

year from 140 violent males, aged 15-22 years, who participated in ACT.

All the females who participated in ECT and all the males who participated in ACT had been arrested for physical aggression and were obliged by the court to follow treatment. In most cases, the court had determined a causal relationship between "insufficient developmental or pathological disorder of the mental faculties" of the offender and his/her offense(s). Data were collected on 23 female patients, aged 14-25 years. Most of the female patients had been arrested for serious violent offenses, including robbery, maltreatment/physical abuse and attempted manslaughter/homicide.

The results are as follows. Twenty-three females started with ECT and a total of 11 participants dropped out (47%). Most of the female participants had a diagnosis of conduct disorder, oppositional disorder, ADHD or personality disorder. More than one-third of the females reported a history of sexual abuse, while almost 50% was a victim of some type of abuse during youth, such as parental physical aggression, emotional violence and/or witnessing parental aggression. Most of the female participants did not want to talk about these abuses during group sessions.

To capture personality characteristics violent female outpatients were compared to "normal females". It was found that violent female outpatients are more emotionally unstable, impulsive and have a lower frustration tolerance. Also, they more frequently experience negative emotions such as: anxiety, anger, and depression feelings. It was also found that they have a more antagonistic, egoistic and competitive attitude towards others. Anger as a trait was more often found among the violent female outpatients than among the normal population. There were no significant differences between violent females and "normal females" on social anxiety and the frequency of performing social skills.

In a second analysis Leenaars (2005) compared violent female outpatients with violent male outpatients on personality characteristics at the start of therapy. The violent female outpatients scored higher on neuroticism and openness, which means that the violent females were more emotionally unstable, impulsive and had a lower frustration tolerance than violent males. They also more frequently experienced negative emotions such as anxiety, anger and depression feelings. The violent females were more curious and sensitive, and more frequently failed to conform to

rules and obligations than their male counterparts. No differences were found on variables such as disposition to anger, extraversion, agreeableness and conscientiousness. A comparison of violent female outpatients and violent male outpatients on behavioral characteristics showed that there were no differences in behavioral characteristics such as anger, hostility, social anxiety and social skills or ability to deal with emotions. The two groups were also compared on physical aggression, verbal aggression, anger and hostility and no statistical significant difference was found. These results indicate that the violent females in the ECT program more frequently have severe emotional problems than either the normal female population or their violent male counterparts. Treatment for violent females should focus on emotional stability and impulsivity and mood problems.

To improve therapy compliance Leenaars (2005) recommends four adaptations to ACT. First, start with pre-therapy sessions, during which the motivation to follow ECT is enhanced. Secondly, intensify therapy and require patients to come to the outpatient clinic twice a week in order to help them with their homework assignments. Thirdly, add a parental education module to ECT. Fourthly,

make ECT groups "open" groups, since the number of female violent patients who are referred is relatively small. According to Leenaars (2005) the findings of this study underscore that adequate treatment programs as a whole should focus more intensively on violent females' emotional instability, impulsivity and mood problems in order to meet their needs.

The third and last study that found anger management to be ineffective is Lipman, Boyle, Cunningham, Kenny, Sniderman, Duku, Mills, Evans and Waymouth (2006). They designed a study that assesses the impact of a community-based anger management groups on child aggressive behaviors. The authors used a randomized, controlled trial (RCT) of community-based aggression management groups for children 7 to 11 years of age and their families. The primary RCT objective was to evaluate whether, among children 7 to 11 years old, aggressive behaviors improve in those who are randomized to participate in community-based, family-focused anger management groups versus controls. The secondary RCT objective was to evaluate improvements in other child outcomes and parent-child relationships.

The sample was composed of 123 children and their families that were recruited through advertisements. The

sample was randomized into two groups, intervention (n = 62) and control (n = 61). The following baseline characteristics were reported. Of the 123 children and families most were male and at least one-third lived in single-parent families. Income varied among the sample. There were no significant differences between intervention and control families at baseline. Only 99 of the original 123 children and families participated in post-program analyses. It was found that there were no significant baseline differences between intervention and control families. In comparison of population means it was found that participant scores on attention-deficit/hyperactivity were 65.8% for intervention and 65.6% for control. It was also found that scores on the internalizing scale were 68.6% for intervention and 66.0% for controls. These two findings indicated that there were no significant differences between intervention and controls on the attention-deficit/hyperactivity and internalizing variables.

To measure treatment effects Lipman et al. (2006) compared means and standard deviations for child- and parent-rated outcome variables at pre- and post-test. Unpaired t tests of change scores for intervention and

control participants demonstrated no significantly different improvements between intervention and control groups ($p > .05$). It was found that pre-/post group changes on all measures showed improvement over time, but a greater magnitude of improvement was found for intervention versus control children on each of the parent-rated measures, but not for child-rated anger, although differences were not significant. There were no significant intervention effects for pre/post comparison of outcome variables. Changes between pre- and post group evaluations for intervention and control participants were child and mental health service use; support worker; social worker other than child welfare; and medication use. These changes were not significantly different between groups ($p > .05$ for all comparisons). The authors also examined whether attendance and group leadership influenced variable outcomes. They found that both the parent's group and children's group had good attendance rates. No significant group leadership effect was found on outcomes.

The results of this study indicated that there was no differential impact of participating in a community-based, family-focused anger management group versus control on parent report of child aggression. Nonsignificant

differences between intervention and control participants were also found for child behavior (hostility, externalizing behavior), parent-child relationships, and parenting stress. Child ratings of their own anger also demonstrated nonsignificant differences between intervention and control. Overall, pre-/post-group changes on all measures improved over time. Children's self-rated anger was the only measure that did not improve over time.

Common Study Limitations

Studies concerning adolescent anger management programs experienced some study limitations. Common limitations are seen throughout these studies. One common limitation is small sample size (Fleming et al., 2000; Gansle, 2005; Ireland, 2004; Kellner & Bry, 1999; Sharp & McCallum, 2005 & Williams, 2002). A second common study limitation is that the sample was not randomly selected (Ireland, 2004 & Kellner & Bry, 1999). Relied on self-reports is the third common study limitation (Hemphill & Littlefield, 2001 & Ireland, 2004). A fourth common limitation is the use of a single measure/assessment (Humphrey & Brooks, 2006 & Lipman et al., 2006). Fifth, the results are not generalizable (Ireland, 2004 & Presley & Hughes, 2000). Some other limitations mentioned were the

Hawthorne Effect (Lipman et al., 2006), lack of a control group (Humphrey & Brooks, 2006), gender (Fleming et al., 2000; Ireland, 2004), and selection criteria hard to replicate (Snyder et al., 1999).

Treatment for Gangs

The different types of treatment for gang members will be explored within this next section of the literature review. Youth gangs are very active in the 21st century. Numerous of schools across the United states report that they have gang activities at their schools. Esbensen, F., Winfree, L., He, N., and Taylor, T. (2001) examined the criterion-related validity of the self-nominated technique (claiming membership) of gang membership. Esbensen et al. (2001) stated that if a person claims gang membership then this self-nomination is valid. Their sample consisted of 5,935 eight grade public-school students from 11 different cities across the U.S. Out of the 5,935 students sampled 944 (16.8%) said that they had been a gang member or are currently a gang member. These self-report's reveal that youth gangs exist. They also reported that the self-nomination technique is a robust measure of gang membership capable of identifying gang from non-gang youth. If youth

are self-reporting that they are in or have been in a gang then one can conclude that these memberships are prevalent at school.

Mark Rizzo (2003) did a study on why children join gangs. There were a lot of interesting facts about youth gangs in this study. First, the typical age range for youth involved in gangs is 12 to 24, with the average age being 17 to 18 years. Second, male gang members outnumbered female gang members, but the number of females joining gangs is increasing. Third, the ethnicity of gang members is 48 percent African American, 43 percent Hispanic, five percent White and four percent Asian.. Rizzo (2003) states that gangs are becoming more prevalent in rural counties, small cities, and towns for reasons that are not well understood; therefore, it is not clear if class, poverty, race or ethnicity is the primary cause of gangs. Fifth, certain offenses are related to different ethnic backgrounds. For example, African American gangs are more involved in drug offenses; Hispanic gangs in turf-related violence; and Asian and White gangs in property crime.

Hispanic youth gangs are structured around age-based cohorts that are based in a specific territory and

characterized by fighting. Their gangs provide a family-like setting for adolescents. African American youth gangs are usually in large cities and tend to replace traditional social networks that link youth with legitimate work opportunities. African American gangs are involved in entrepreneurial activities such as drug trafficking. According to Rizzo (2003), no consensus exists on what constitutes a youth gang. Some jurisdictions deny youth gangs existence, other mistake youth gangs for law-violating groups or the youth gangs are called by other names such as "crew" or "posses." Houston (1995) states that the increased visibility of street gangs across America has caused concern to citizens, criminal justice practitioners, and legislators. Since there is a recognized youth gang problem across the United States that is continuously being addressed by intervention and prevention efforts, it will be interesting to explore the types of treatment gang members are receiving.

In 1995 Houston researched interventions for gang members. He wanted to see what really works for these individuals. He also felt that past gang intervention research never addressed gang members directly. He states, "no one has seriously consulted the recipients of

intervention efforts on what they think works best as an approach to either preventing youth from becoming involved in the gang culture or what works to divert youth from gangs once they are involved" (p. 1). Houston (1995) took a national survey of former and present gang members from around the nation on what they believe works best in gang prevention and intervention. Houston's results from the survey focused around what gang members, former gang members, and others who are aware of gangs thought about the various ways to prevent youth from becoming involved in gang activities.

The sample consisted of 3,348 respondents of which 1,994 admitted to being a gang member. Most of the respondents were between the ages of 14-18 years (88.8%) and were males (91.3%). It was found that one-half of the sample agreed that prevention efforts can effectively prevent youth from becoming involved in gangs, but there was little agreement of what kinds of prevention efforts are effective. Seventy-five percent of the respondents agreed that prevention efforts need to be done sooner than later. It was interesting to see that 93.5% of respondents would like to get married, get a legal job, and have

children. This finding indicates that intervention efforts should be geared to address these wants of gang members.

Houston's (1995) study yielded the following results. First, school education is not believed to be an effective prevention effort. Forty-five percent of the sample feels the education will not prevent gang membership. Second, 49% of the respondents feel that job training and employment is the best solution for the gang problem. Third, gang members view suppression as an important deterrent to gang membership. Fourth, respondents believe that counseling programs such as the street social worker program are an effective gang intervention. From these findings, Houston (1995) recommends that policies and programs for gang prevention and intervention should be formulated to address employment, job training, and gang suppression. He also states that programs which make the "implementer" feel good (ex. outdoor challenges and mentoring) should be discontinued and programs that address the factors that promote gang membership should be implemented. Another recommendation is that money needs to be channeled more into activities that prepare youth for the future and that allow them to acquire the necessary competitive skills for the real world.

Venkatesh (1999) looked into the depths of community-based interventions for street gangs. His goal was to arrive at a more informed understanding of the relationship between gangs and communities and to develop social policy recommendations that would enable social scientist, policy makers, and practitioners to formulate responsive and effective street gang interventions that work with the full range of service providers in a community. Venkatesh (1999) examined three community-based intervention strategies on the part of the lower tier of service providers in the Chicago metropolitan area. Three examples were chosen because they show the ways in which residents of different low-income and poor communities communicate and interact with one another even though these communities are not well-connected to mainstream institutions and spaces.

In example one, public housing complexes such as Cabrini Green and Henry Homer were suffering from high levels of gang activity and municipal neglect along with crime and drug distribution. In response to this the city granted these public housing complexes a few resources for physical upkeep and security. This was not enough to reduce the criminal and gang activity. The resources were

not fixing the problems the complexes were facing. Venkatesh (1999) stated that there is a social distance between the elite-tier providers and the majority of housing development tenants. Because of this distance public housing residents are forced to find alternative, nontraditional means of ensuring their needs are met, which is called survival strategies. A few examples of these types of strategies are: tenant patrols, funds in which residents pay dues to a common pool that is dispersed for emergency purposes, and day care arrangements that allow parents to run errands or look for work.

To address the problems and needs of this community tenants teamed up with No More Wars Agency. This agency is a grass-root agency that is known for resolving gang conflicts. The first thing the dual did was conduct focus groups among residents and gang members, in which conflicts were discussed and possibly resolved. The agency also solicited a community center where they held open forums for gang members to air their grievances and settle their disputes. This forum grew into community court in which gang members and residents both can come to settle any disputes and address harassment and violence. The indication here was that the resident felt some sort of

public safety in there community because the gang members were participating.

In example two, a predominantly African-American community of working class homeowners and low income renters had a serious gang problem. The community retained two gangs, the Black Kings and the Almighty Queens. The gangs took over public spaces and used abandoned and boarded-up buildings as headquarters. There were reports of gang-related sexual abuse and harassment of young women in the community. There was also drug distribution taking place. Local pastors stepped up to the plate when they became angry with the local law enforcement response to the activities going on in the community. The local pastors wanted to find an effective way to intervene in the gangs practices. Therefore, the pastors held a meeting with other ministers and pastors, school officials, and with staffers at a local health clinic. Together these groups formed community patrols and actively pursued gang members that were accused of committing sexual abuse by issuing press releases and posted signs about the incident. The group also placed pressure on the local district police commander and marched in front of the abandoned buildings that the gang members occupied. This is an example of a

community-based intervention dedicated to working with organized trouble youth groups.

Chicago's Latino gangs were addressed in example three. The Latino community also used the No More Wars agency as in example one. The agency met with Latino gang leaders in prison. The leader asked the agency to help settle Latino gang disputes and assist Latino youth who wanted to re-integrate into mainstream society. Once again, the agency developed forums where gang members, troubled youth, and residents came together to address common concerns. Together they identified several issues that impacted all residents: exploitative grocery store owners, ethnic-owned establishments that were not responsive to community needs, and civil demonstrations against municipal resource allocation.

No More Wars took action to address the Latino community concerns. First, political education workshops were administered to gang members and citywide summits were hosted in which gang members shared their experiences. Gang leaders were asked to use their organizations for social advocacy and youth mobilization rather than criminality. Second, No More Wars worked with grass-roots agencies to boycott stores that sold food at an inflated

price or that offered poor quality meat and produce. Stores that were not giving back to the community were also targeted. Third, political rallies were organized to address subjects such as school funding or inadequate police enforcement. It is important to note that the gang members in this community participated in the events mentioned above because it was a command from their leader. Last, peace treaties were formed among warring gangs and safe public spaces were created. The end results of this effort were that the residential community started receiving valuable assistances and gang activity began to be addressed.

The three examples above show a community based effort to dealing with gangs. Community members felt that local law enforcement was not addressing their needs or concerns and so they decided to deal with the problem themselves. Some communities sought the help of the No More Wars Agency. This agency filled the gaps in service delivery and representation in poor communities that city and government officials did not. Gang activity was addressed and minimized. The community residents and organizations in the three examples faced difficult challenges in their attempts to intervene in street gang structure but they did

get through it. This community based treatment allows the gang members to have a role in the community-building initiative and this led to less crime and gang activity.

Griffin and Meacham (2002) addressed the problems of gang activity in secondary schools and offers some intervention possibilities. They state that school gangs became an epidemic in the 1980's and 1990's and is still a concern in schools throughout the United States today. The working definition of a gang for this article is as follows: a gang is a visible group of youths who engage at least some of the time in behaviors that are troublesome to the community in which they are part and sometimes are illegal.

The indicators of gang presence are addressed first. According to Griffin and Meacham (2002) there are several indicators of gang activity. Graffiti is often the first indication of gang activity. Graffiti is used by the gangs to affirm gang identity, affirm member identity, to mark territorial ownership rights, to issue a challenge, to memorialize a deceased member, to disrespect a rival gang's deceased member, to celebrate violent acts, to list intended victims, and to intimidate rival gangs. Other indicators include hand signs, a style of dressing or

dressing in a particular color, and tattoos of gang logos. Second, gang characteristics and statistics are addressed. The majority of gang members are adolescents with some exceptions to younger children and grown men being involved. Also, the number of females joining gangs is increasing. In terms of territory, gangs are still prevalent in larger cities but they are now expanding to middle class neighborhoods and smaller cities (Griffin & Meacham, 2002).

Third, the article touches on intervention possibilities. Griffin and Meacham (2002) suggest that gang intervention, prevention, and suppression programs should be considered once a school recognizes gangs are prevalent on their campus. One prevention effort suggested is parents. Parents can play a vital role in gang prevention by developing positive alternatives in which children participate, communicate with other parents, work with police and other community agencies to understand the reason children join gangs, and organize other parents and local community agencies to help stem the growth of gangs in neighborhood (Griffin & Meacham, 2002).

Another suggested intervention is school-based strategies. The school based strategies are programs that

address gang awareness, class behavioral expectations, understanding graffiti, victim support, parent notification and law enforcement cooperation. Griffin and Meacham (2002) found that school gang reports sheet can be an effective intervention. The sheets are used to gather data on the occurrence of gang activity and then are used to create effective responses to different types of gang behaviors. Also, schools can develop systematic guidelines in which personnel use when responding to gang activity.

The studies addressed in this section indicate that there are various prevention and intervention efforts for gangs. One study found that addressing gang members individually will help in decreasing gang membership. Gang prevention and intervention efforts that proved to be effective in this study are: job training and employment, gang suppression, and counseling programs (Houston, 1995). Another study found that community-based intervention and prevention efforts are effective as well. Community residents along with grass-root agencies worked together to fight against gang activities in their community. They used strategies such as citizen patrols, community court, and direct communication with gang leaders. This intervention effort was found to be successful when gang

members became more involved in building the community rather than participating in criminal activities (Venkatesh, 1999).

Other prevention and intervention efforts for gangs range from parent involvement to school based awareness programs (Griffin & Meacham, 2002). Griffin and Meacham (2002) suggest that gang reports sheets be used as an intervention measure for school-based gangs. This type of intervention should be used for all communities that are facing gang problems because the sheets contain data about gang activity and allows for a response to fit that communities needs for gang intervention and prevention.

Overall, research in the area of anger management has supported the notion that anger management programs for adolescents do have a positive impact. Anger management programs are an effective way of changing adolescents' aggressive behavior and reducing violence. There is consistent support for the effectiveness of these programs (Herrmann & McWhirter, 2003; Ireland, 2004; Kellner & Bry, 1999; Snyder et al., 1999; Hemphill & Littlefield, 2001; Thomas & Smith, 2004; Hornsveld, 2005). Each study addressed in the program effectiveness section of the literature review used different samples of adolescents and

different types anger management programs and most of them had the same conclusion that anger management programs are effective. One reason for this is that early adolescence is potentially one of the best times for prevention and intervention programs targeting at-risk youth (Herrmann & McWhirter, 2003). Or in other words, it is easier to prevent or reduce aggressiveness and violence in early adolescence because these are the years of critical development.

As stated before, different samples of adolescents were used to explore anger management program effectiveness. One sample that is amongst the whole adolescent population is gang-related youth. The studies reviewed in the treatment for gangs section of the literature review indicated that interventions are out are as community based programs, gang suppression, parent involvement, employment and job training (Houston, 1995; Griffin & Meacham, 2002; Venkatesh, 1999). None of the interventions mentioned in this section used anger management counseling as a possible intervention strategy for gang-related youth.

The study sample similar to gang-related youth in the literature review is young male prisoners. Ireland (2004)

studied the effectiveness of anger management counseling on young male offenders in prison and found that anger management was effective. There is lack of evidence that anger management is a valid intervention strategy for gang-related youth, therefore; this study addressed the effectiveness of anger management counseling on gang-associated adolescents.

Current Study

Since anger management is effective among various samples of adolescents, this study explores recidivism rates of gang associated adolescents in the Project BRIDGE Program who have participated in anger management counseling. This study explores if anger management is a valid intervention strategy for gang-related adolescents. The overall effectiveness of the Project BRIDGE Program will also be explored in this study. Three hypotheses are tested;

H1: Adolescents in the Project BRIDGE Program who had anger management counseling will have lower recidivism rates than adolescents in the Project BRIDGE Program who did not have anger management counseling.

H2: Adolescents in the Project BRIDGE Program who had more anger management counseling minutes will have lower recidivism rates than adolescents in the Project BRIDGE Program with less anger management counseling minutes.

H3: Adolescents in the Project BRIDGE Program who had more total program contact minutes will have lower recidivism rates than adolescents in the Project BRIDGE Program with less total program contact minutes.

CHAPTER THREE

METHODOLOGY

The Project BRIDGE Program

The Project BRIDGE (Building Resources for the Intervention and Deterrence of Gang Engagement) Program is designed to target gang-involved youth between the ages 12 and 22 in the City of Riverside, California. The goal of Project BRIDGE is to adapt, implement, and test a comprehensive program model design for gang prevention, intervention, and suppression; one which will mobilize the multi-disciplinary leadership within the Riverside community and reduce the incidence of youth gang violence, gang membership, and gang-related activities.

The youth are accepted into the program through two referral services: the Juvenile Probation's Gang Supervision Unit and community members. Youth in the program are referred by outreach workers, school representatives, and law enforcement officers. Youth who are gang-involved and on probation are referred to as "Phase II" and youth who are non-adjudicated and are known to be gang-involved are referred to as "Phase I." There are eight project areas in Riverside: Arlanza, Casa

Blanca, Downtown, Eastside, Hillside, La Sierra, Northend, and Southend.

The outreach staff consists of four Outreach Workers and one Lead Outreach Worker. Each Outreach Worker maintains an average caseload of twenty youth. Outreach Workers are to contact the youth so many times a week depending on their supervision level. Maximum supervision requires three contacts per week, medium supervision requires two contacts per week, and minimum supervision requires one contact per week. Project BRIDGE program activities include anger management, substance abuse counseling, tutoring, cultural diversity, young women's support group, bowling, precious metal clay workshop, nutrilite, Raging Waters, farmer's market, writing and art workshop, Museum of Tolerance, Raging Waters, and Magic Mountain. All activities are logged as contact minutes.

Data Collection and Sample

Secondary data are being used for this study. These type of data are not reliable because it was not collected by the researcher. The outreach staff logs all their contact information into a database and every fiscal year a report is written to evaluate the program's progress. Two

fiscal years were used, July 1, 2003 through June 30, 2004 and July 1, 2004 through June 30, 2005. Information included in these data consists of enrollment date, project area, arrest records, outreach worker, and the details of every contact. The sample consists of 73 youth who were new enrollees in the Project BRIDGE during the 2003-2004 and 2004-2005 fiscal years. The youth in this sample have volunteered to participate in the program; therefore, the sample was not randomly selected. The researcher used the birth date of each youth to derive their age. The age range for this sample is 12 to 22 years of age. The data are held as confidential and all identifiers were removed prior to completion of the research project.

Variables

The key variables of this study are age, anger management minutes, anger management sessions and arrests. There are three independent variables for this proposed study: anger management sessions, anger management minutes, and total program contact minutes. For hypothesis one, the independent variable is anger management sessions. This variable is measured by the number of anger management sessions completed by each program participant. Anger

management sessions were coded into two categories, 0 for no anger management counseling sessions and 1 for one or more anger management counseling sessions. For an additional analysis, the anger management counseling sessions variable were kept as continuous.

For hypothesis two, the independent variable is anger management minutes. This variable is measured by the number of anger management session minutes completed by each program participant. Anger management session minutes is coded into three categories: 1) no anger management session minutes (0); 2) low anger management session minutes (1-699) and 3) high anger management session minutes (700+). For an additional analysis, the anger management session minutes variable were kept as continuous. For hypothesis three, the independent variable is total program contact minutes. This variable is measured by the total number of program contact minutes for each participant. Total program contact minutes is coded into three categories: 1) no total program contact minutes (0); 2) low total program contact minutes (1-1564) and 3) high total program contact minutes (1565+). The dependent variable is arrests. Total program contact minutes were also kept as a continuous variable for an additional analysis.

Age

Participant's age was derived from the participant's date of birth that was included in the data provided by The Project BRIDGE Program.

Arrests

This variable was measured by using arrest data of each participant provided by the Riverside Police Department. The number of arrests was coded into two categories, 0 for no arrests and 1 for one or more arrests.

CHAPTER FOUR

ANALYSIS

Crosstabulation and Mann-Whitney U tests were used to examine the effectiveness of anger management programs on recidivism rates of gang-related adolescent in the Project BRIDGE Program. Table 1 shows the sample characteristics of the adolescents in the Project BRIDGE Program that participated in the study.

Table 1

Sample Characteristics

Variables	Mean, SD	Number	Percentage
Age	19.11(1.68)		
Arrests			
Before Enrollment		61	83.6%
After Enrollment		35	47.9%
Anger Management Sessions	2.82(3.25)		
Anger Management Minutes	362.47(424.30)		
Total Contact Minutes	2267.33(2499.11)		

The participants in this study were comprised of a total of 73 male and female adolescents. Gender data were not included in the data set provided by the program;

therefore, the breakdown of male and females in the sample is not available. The age range of this sample is 12 to 22 years ($m = 19.11$, $SD = 1.68$). Selected demographic characteristics are presented in Table 1. Eighty-four percent ($n = 61$) of the participants were arrested one or more times before program enrollment and 48% ($n = 35$) of the participants were arrested one or more times after program enrollment. Hence, the number of arrests decreased after participation in the Project BRIDGE Program began.

To test if there were any significance between arrests before and arrests after program enrollment a Mann-Whitney U test was conducted. It was found that there was no statistically significant difference between adolescents who had been arrested before program enrollment and adolescents who had been arrested after program enrollment ($U = 266$, $Z = -1.729$, $p = .084$). The mean number of anger management sessions completed by the adolescents in the Project BRIDGE Program is 2.82 with a standard deviation of 3.25. The mean number of anger management minutes completed by adolescents in the Project BRIDGE Program is 362.47 with a standard deviation of 424.30. The mean number and standard deviation for total program contact minutes is $M = 2267.33$, $SD = 2499.11$.

Table 2 is developed from hypothesis one which states that adolescents in the Project BRIDGE Program who had anger management counseling will have lower recidivism rates than adolescents in the Project BRIDGE Program who did not have anger management counseling. The data in Table 2 show the number of anger management counseling sessions by the number of arrests after program enrollment for the total population.

Table 2

The Percentage of Anger Management Counseling Sessions by Arrests After Program Enrollment

			Anger Management Counseling Sessions		Total
			No Anger Management Counseling Sessions	1 or More Anger Management Counseling Sessions	
Arrests After Program Enrollment	No Arrests	Count % within amsr	17 60.7%	21 46.7%	38 52.1%
	1 or More Arrests	Count % within amsr	11 39.3%	24 53.3%	35 47.9%
Total		Count % within amsr	28 100.0%	45 100.0%	73 100.0%

Chi-square = 1.365, df = 1, p = .243

Crosstabs were run to test the effectiveness of anger management counseling on arrest after enrollment. Table 2 shows that adolescents in the Project BRIDGE Program who did not have anger management counseling (61%) are somewhat less likely to be arrested after program enrollment than adolescents in the Project BRIDGE Program who had anger management counseling (47%). The crosstab also indicates that adolescents in the Project BRIDGE Program who had anger management counseling (53%) are more likely than adolescents in the Project BRIDGE Program who did not have anger management counseling (39%) to be arrested after program enrollment. The chi-square significance is .243 which is more than .05 indicating that the relationship between anger management counseling and arrests after program enrollment is not statistically significant.

A Mann-Whitney U test was conducted to compare the mean ranks for statistical significance (see Table 3). The test was carried out between adolescents in the Project BRIDGE Program who had no arrests after program enrollment and adolescents in the Project Bridge who had one or more arrests after program enrollment on anger management counseling sessions.

Table 3

Ranks of Arrests After Program Enrollment by Anger Management Counseling Sessions (a,b)

Arrests After Program Enrollment		N	Mean Rank	Sum of Ranks
Anger Management Counseling Sessions	None	38	34.67	1317.50
	One or more	35	39.53	1383.50
	Total	73		

a. $U = 577$, $Z = -1.008$, $p = .313$

b. Grouping Variable: arrests after program enrollment

For this statistical analysis anger management counseling sessions were used as a continuous variable and arrests was coded as (0) for no arrests and (1) for one or more arrests. Alpha was set at 0.05 for this analysis. The test showed that there was no statistically significant difference between adolescents in the Project BRIDGE Program who had no arrests after program enrollment and adolescents in the Project BRIDGE Program who had one or more arrests after program enrollment, $U = 577$, $Z = -1.008$, $p > .05$ (computed = .313). The critical value of Z indicates that the null hypothesis was not rejected and the data is skewed to the left of the mean.

The mean rank of adolescents who had one or more arrests after program enrollment (39.53) is slightly higher than the mean rank of adolescents who had no arrests after

program enrollment (34.67) and so those who had one or more arrests after program enrollment attended more anger management counseling sessions than those with no arrests after program enrollment. It is clear that anger management counseling sessions did not help reduce recidivism rates.

Table 4 was developed from hypothesis two. Hypothesis two states that adolescents in the Project BRIDGE Program with more anger management counseling minutes will have lower recidivism rates than adolescents in the Project BRIDGE Program with less anger management counseling minutes. The data in Table 4 show the number of anger management counseling minutes by the number of arrests after program enrollment.

Table 4

The Percentage of Anger Management Counseling Minutes by Arrests After Program Enrollment

			Anger Management Counseling Minutes			Total
			None	Low	High	
Arrests After Program Enrollment	No Arrests	Count % within ammr	17 60.7%	14 46.7%	7 46.7%	38 52.1%
	1 or More Arrests	Count % within ammr	11 39.3%	16 53.3%	8 53.3%	35 47.9%
Total		Count % within ammr	28 100.0%	30 100.0%	15 100.0%	73 100.0%

Chi-square = 1.365, df = 2, p = .505

Crosstabs were run to see if there were some sort of association between the number of anger management minutes and arrests after program enrollment. It was found that adolescents in the Project BRIDGE program that had no anger management minutes (61%) are somewhat more likely than adolescents in the Project BRIDGE Program with low (47%) or high (47%) anger management minutes not to be arrested after program enrollment. The crosstabs also revealed that adolescent with low (53%) and high (53%) anger management minutes are more likely to be arrested after program enrollment than adolescents who had no anger management minutes (39%). The significance of chi-square in this

analysis is .505 which is greater than .05. This finding indicates that the relationship between anger management counseling minutes and arrest after program enrollment is not statistically significant.

To further testing of significance a Mann-Whitney U test was conducted in which anger management counseling minutes were ran as a continuous variable (see Table 5). Arrests were recoded into two categories (0) for no arrests after program enrollment and (1) for one or more arrests after program enrollment. This test compared mean ranks between adolescents in the Project BRIDGE Program who had no arrests after program enrollment and adolescents in the Project BRIDGE Program who had one or more arrests after program enrollment on anger management counseling minutes. Alpha was set at 0.05 for this analysis.

Table 5

Ranks of Arrests After Program Enrollment by Anger Management Counseling Minutes (a,b)

	Arrests After Program Enrollment	N	Mean Rank	Sum of Ranks
Anger Management Counseling Minutes	None	38	34.59	1314.50
	One or more	35	39.61	1386.50
	Total	73		

a. $U = 574, Z = -1.040, p = .298$

b. Grouping Variable: arrests after program enrollment

It was found that there was no statistically significant difference between adolescents in the Project BRIDGE Program with no arrests after program enrollment and adolescents in the Project BRIDGE Program with one or more arrests after program enrollment, $U = 574$, $Z = -1.040$, $p > .05$ (computed $p = .298$). The critical value of Z indicates that the null hypothesis was not rejected and the data is skewed to the left of the mean. The mean rank of adolescents in the Project BRIDGE Program who had one or more arrests after program enrollment (39.61) is higher than adolescents in the Project BRIDGE Program enrollment who had no arrests after program enrollment (34.59). This finding means that adolescents who had one or more arrests after program enrollment had more anger management counseling minutes than adolescents who had no arrests after program enrollment. The more anger management counseling minutes an adolescent had the more likely they were to recidivate.

To control for anger management counseling minutes a ratio between anger management counseling minutes and total program contact minutes was computed (see Table 6). When computed there were only 45 valid cases out of 73. Cases in which there was no anger management counseling minutes were

considered as a missing value. The ratio of anger management minutes was then subjected to a Mann-Whitney U test. The test compared the mean ranks between adolescents with no arrests after program enrollment and adolescents with one or more arrests after program enrollment on the ratio of anger management minutes.

Table 6

Ranks of Arrests After Program Enrollment by the Ratio of Anger Management Counseling Minutes (a,b)

Arrests After Program Enrollment		N	Mean Rank	Sum of Ranks
Ratio of Anger Management Minutes	None	21	23.24	488.00
	One or more	24	22.79	547.00
	Total	45		

a. $U = 247$, $Z = -.114$, $p = .909$

b. Grouping Variable: arrests after program enrollment

The test showed that there was no statistically significant difference between adolescents in the Project BRIDGE Program with no arrests after program enrollment and adolescents in the Project BRIDGE Program with one or more arrests after program enrollment, even when controlled for anger management counseling minutes. There is no relationship between the ratio of anger management minutes/total program contact minutes and arrests after program enrollment

Table 7 was developed from hypothesis three. Hypothesis three states that adolescents in the Project BRIDGE Program who had more total program contact minutes will have lower recidivism rates than adolescents in the Project BRIDGE Program with less total program contact minutes. The data in Table 7 show the number of total program contact minutes by the number of arrests after program enrollment.

Table 7

The Percentage of Total Program Contact Minutes by Arrests After Program Enrollment

			Total Program Contact Minutes			Total
			None	Low	High	
Arrests After Program Enrollment	No Arrests	Count	2	20	16	38
		% within tcmr	50.0%	58.8%	45.7%	52.1%
	1 or More Arrests After Enrollment	Count	2	14	19	35
		% within tcmr	50.0%	41.2%	54.3%	47.9%
Total		Count	4	34	35	73
		% within tcmr	100.0%	100.0%	100.0%	100.0%

Chi-square = 1.195, df = 2, p = .550

In effort to establish an association between total program contact minutes and arrests after program

enrollment crosstabs were ran. The crosstabulation analysis revealed two things. First, adolescents in the Project BRIDGE Program with low total program contact minutes (59%) are more likely not to be arrested after program enrollment than adolescents in the Project BRIDGE Program with no total program contact minutes (50%) and adolescents with high total program contact minutes (46%). Second, adolescents in the program with high total program contact minutes (54%) and no total program contact minutes (50%) are more likely to be arrested after program enrollment than adolescents in the program with low total program contact minutes (41%). The significance of chi-square is .550 which is greater than .05. This indicates that the relationship between total program contact minutes and arrests after program enrollment is not statistically significant.

Once again, a Mann-Whitney U test was conducted to test for further significance (see Table 8). For this test total program contact minutes were ran as a continuous variable and arrests were recoded into (0) for no arrests and (1) for one or more arrests. The test was carried out between adolescents in the Project BRIDGE Program who had no arrests after program enrollment and adolescents in the

Project BRIDGE Program who had one or more arrests after program enrollment on total program contact minutes. Alpha was set at 0.05.

Table 8

Ranks of Arrests After Program Enrollment by Total Program Contact Minutes (a,b)

Arrests After Program Enrollment		N	Mean Rank	Sum of Ranks
Total Program Contact Minutes	None	38	35.57	1351.50
	One or more	35	38.56	1349.50
	Total	73		

a. $U = 611, Z = -.602, p = .547$

b. Grouping Variable: arrests after program enrollment

In comparison of the mean ranks between adolescent with no arrest and adolescent with one or more arrests on total program contact minutes, it was found that there was not a statistically significant difference between adolescents in the Project BRIDGE Program with no arrest after program enrollment and adolescents in the project BRIDGE Program with one or more arrests after program enrollment, $U = 611, Z = -.602, p > .05$ (computed $p = .547$). Once again, the critical value of Z indicated that the null failed to be rejected and that the data is skewed to the left of the mean. The mean rank for adolescents who

had one or more arrests after program enrollment (38.56) is higher than the mean rank for adolescents who no arrests after program enrollment (35.57). So the adolescents who had one or more arrests after program enrollment had more total program contact minutes than adolescents who had no arrests after program enrollment.

CHAPTER FIVE

DISCUSSION

In the above analysis section it was found that there is no statistically significant relationship between recidivism and anger management counseling for gang-related adolescents in the Project BRIDGE Program. This finding is consistent with Lipman et al. (2006) in which it was found that anger management had no statistically significant effect on child aggressive behavior. Most of the studies reviewed found that anger management counseling is effective in reducing an adolescent's aggressive behavior and aggressive incidents (Herrmann & McWhirter, 2003; Ireland, 2004; Kellner & Bry, 1999; Synder et al., 1999). This finding sparked an interest to develop an exploratory study to test the effectiveness of anger management counseling on recidivism rates of gang-related adolescents. The result of the statistical analyses suggests that anger management counseling was not effective in reducing recidivism amongst the adolescents in the Project BRIDGE Program.

Three relevant findings were revealed in the statistical analysis. First, it was found that adolescents

in the Project BRIDGE Program that attended anger management counseling are more likely to be arrested after program enrollment than adolescents who did not attend anger management counseling at all. This finding does not support hypothesis one. The Mann-Whitney U test on hypothesis one seconded this notion. The findings suggest that anger management is not needed by these adolescents. Since anger management is not a need the adolescents will be successful; no need is a proxy for success. Anger management counseling was not effective in reducing recidivism rates.

The second relevant finding is that adolescents in the Project BRIDGE Program that had low to high anger management counseling minutes are more likely to be arrested after program enrollment than adolescents that had no anger management counseling minutes. This finding did not support hypothesis two. As with the first finding, adolescents that are actually participating in anger management counseling are recidivating more than those that are not participating in counseling. The results from the Mann-Whitney U test arrests and anger management counseling minutes revealed that adolescents in the Project BRIDGE Program with one or more arrests after program enrollment

had more anger management counseling minutes than adolescents in the program with no arrests after program enrollment. It is clear from this finding that more anger management counseling minutes did not help reduce recidivism rates.

The third and last relevant finding of this study is that adolescents with high and no total program contact minutes are more likely to be arrested after program enrollment than those with low total program contact minutes. The Mann-Whitney U test conducted on arrests and total program contact minutes found that adolescents in the Project BRIDGE Program with one or more arrests after program enrollment had more total program contact minutes than adolescents with no arrests after program enrollment. This finding indicates that more total program contact minutes were not a helping factor in reducing recidivism rates. This finding does not support hypothesis three. Overall, recidivism rates for the adolescents in the Project BRIDGE Program that participated in anger management counseling increased. Those who attended anger management counseling are more likely to be arrested than those that did not attend anger management counseling. The effectiveness of anger management counseling for gang-

related adolescents in the Project BRIDGE Program is not statistically significant.

The conclusion here is that anger management is not a valid intervention strategy for gang-related adolescents. This finding is not consistent with the previous studies that were reviewed in the literature review section. This difference could be due to the fact that the sample selection of adolescents in the previous studies was drawn from a school population and the sample for this study are gang-related adolescents that are on probation. Houston (1995) found that education was not an effective intervention for gang members. This statement is found reliable in this study. Adolescents in the Project BRIDGE program were being taught about anger during the anger management counseling sessions. This is a form of education and this education was not effective in reducing recidivism amongst these adolescents.

A number of suggestions are made from the findings of this study. One, the association between increased recidivism rates of adolescents in the Project BRIDGE Program who attended anger management counseling should be explored further to see why anger management was not effective. Anger management counseling was just one

component out of a number of activities that adolescents in the Project BRIDGE Program participated in; therefore, I suggest that adolescents in this program only be subjected to anger management to further test the effectiveness of anger management on recidivism rates on gang-related adolescents. There were very few studies that dealt with gang-related adolescents and anger management; therefore, I also suggest that this topic be explored further.

Validity and Reliability

The first limitation of this study is that the data came from a secondary source. Secondary data are not that reliable because the researcher did not personally collect these data. The second limitation is that the sample size of this study is relatively small ($n = 73$). The results may not be generalizable to the rest of the juvenile population making the results invalid. A third limitation of this study is that the participants were not randomly selected. The fourth limitation of this study is that the arrest data is limited to only Riverside County, California. The researcher has no way of knowing if the participants were arrested in other counties. The fifth limitation is selection bias. Participants either

volunteered or were forced to participate in the Project BRIDGE Program.

In conclusion, the results of this evaluation of the effectiveness of anger management counseling on recidivism rates were negative. Recidivism rates increased as the number of anger management counseling sessions, anger management minutes and total program contact minutes increased. The results of this study suggest that the Project BRIDGE Program should re-evaluate the anger management component of their program. Re-evaluation should focus on improving the program effectiveness. If a re-evaluation is not done then the program should consider eliminating this component because adolescents in the program are recidivating more after program enrollment. The program may or may not be contributing to increased recidivism and therefore should be re-evaluated.

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