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A Comparison of Cognitive Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population

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A COMPARISON OF COGNITIVE RESTRUCTURING AND SYSTEMATIC DESENSITIZATION TECHNIQUES FOR ANGER REDUCTION WITH AN INMATE POPULATION

by

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A COMPARISON OF COGNITIVE RESTRUCTURING AND SYSTEMATIC DESENSITIZATION TECHNIQUES FOR ANGER REDUCTION WITH AN INMATE POPULATION

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Western Michigan University, 2000

This was a dismantling study comparing the effectiveness of the Cognitive Restructuring (CR) and the Systematic Desensitization (SD) components of Deffenbacher et al.'s (1987, 1988, 1990, 1992, 1994) treatment of anger. This study utilized an inmate population in a rural county jail. Each group completed a battery of measures (State-Trait Anger Expression Inventory [Spielberger, 1996]; Anger Symptom, and Anger Situation [Hazaleus & Deffenbacher, 1986]) at baseline (5 weeks prior to treatment), pretreatment, and posttreatment. Subjects completed an Anger Log weekly and a Satisfaction measure following treatment. The Structured Clinical Interview for *DSM-IV*: Patient Questionnaire was completed during the baseline period to assess potential mental health issues for descriptive purposes. Results from the SCID-PQ were not used as exclusionary criteria.

Subjects were assigned to either the CR group or the SD group. Groups met for 5 weeks. Independent graduate student raters coded audio-tapes of the groups to assess adherence to the treatment protocol. Independent samples *t* tests were utilized to test differences between groups at baseline, pretreatment, and posttreatment and Satisfaction data. Paired samples *t* tests evaluated baseline to pretreatment group differences and tested treatment adherence data. Univariate ANCOVAs were utilized using pretreatment scores as the covariate to determine treatment effects. Repeated

Measures ANOVA was computed to determine differences between treatment groups and from pretreatment to posttreatment.

The SD group demonstrated significantly lower scores on the Anger Situation measure from pretreatment to posttreatment and in comparison to the CR group at posttreatment for both ANCOVA and ANOVA analyses. This difference met statistical and clinical significance, suggesting that the SD group may have benefited more from treatment on this variable. The SD group also demonstrated higher scores in Anger Control in comparison to the CR group at the posttreatment assessment. The difference between Anger Control was not supported by the ANCOVA or ANOVA analyses, suggesting that the difference may not be due to treatment effect. The Repeated Measures ANOVA analysis found a significant difference from pretreatment to posttreatment for the Trait Anger Subscale and the Anger Out Subscale. Both groups reported comparable satisfaction with treatment received.

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Lori Ann Diaz

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CHAPTER I

INTRODUCTION

Anger as a Societal Problem

Violence and Aggression

It is difficult to ignore the violence and aggressive behavior in today's society. On a daily basis, an individual has only to turn on the news and view a report of the occurrence of a violent act toward another individual. In fact, it is estimated that each person has an 83% chance of being a victim of a violent crime over his or her lifetime (American Correctional Association, 1989). According to Megargee (in Sutker and Adams, 1993) this violent crime may include murder, assault, robbery, kidnapping or rape. Furthermore, for individuals who have been victims of violent crime, it is not unlikely that they may be victimized again (Flanagan & Jamison, 1989). Moreover, violence is not isolated to the inner city streets. According to Toufexis (1994), each year at their place of employment, more than 1,000 individuals are murdered, more than 2 million are assaulted, and more than 6 million are threatened. In addition, Goldstein (1994) indicates that from 1986 to 1990, more than 300 individuals were murdered or seriously wounded, and 242 were held hostage in American schools. Information such as this often leaves one feeling helpless and vulnerable.

Reduction of Anger or Aggressive Behavior

Unfortunately, therapeutic interventions to decrease aggressive behaviors are often unsuccessful. According to DiGuiseppe, Tafrate, and Eckhardt (1994), this inefficacy in treating aggression is directly related to the failure to treat the anger that frequently precedes it. On the other hand, treatments that are considered to be successful (as evidenced by a decrease in aggressive behaviors) often leave behind substantial levels of anger (DiGuiseppe et al., 1994). This residual anger frequently contributes to interpersonal, peer, and employment-related difficulties (DiGuiseppe et al., 1994). According to Spielberger, Crane, Kearns, Pellegrin, and Rickman (1991), suppressed anger increases risk for hypertension, cardiac distress, and cancer. DiGuiseppe et al. emphasize the necessity of targeting anger and aggressive behavior separately.

DiGuiseppe et al. (1994) attribute the lack of attention to the importance of anger in aggressive behavior to the comparably sparse research in the area. In a computer search of Psychological Abstracts from 1985 through 1993, DiGuiseppe et al. found 7,355 articles regarding anxiety, 15,369 on depression, and only 704 involving anger. To further compound the problem, DiGuiseppe et al. found only 14 studies which compared an anger treatment to a control condition. As a result, few psychotherapeutic strategies for treating anger have been tested empirically. DiGuiseppe et al. stress the importance of clinically relevant research to identify effective treatment strategies for the reduction of anger. They indicate that a reasonable place to begin is where therapists have been finding the most success in a clinical setting, namely, treatments involving an exposure component.

Another factor that may contribute to the lack of research attention to anger may be reluctance to utilize self-report as data (Kassinove, 1995). Whereas anxiety may be recorded as "behavioral avoidance" or "physiological reactivity," and similarly depression as "low responding" or "low-frequency responding," the self-reported "I feel angry" may not seem appropriate in research reports (Kassinove, 1995). The same self-report of anger, however, is clinically significant to a practitioner. Given the potential ramifications of the overt expression of anger (i.e., poor evaluation by peers, negative self-concept, occupational difficulties, dysfunctional relationships, property destruction, and physical/verbal assault), and the possible health consequences of suppressed anger (i.e., hypertension, coronary, artery disease, and cancer), these self-reported issues must be addressed in treatment (Deffenbacher & Stark, 1992; Harburg, Gleiberman, Russell, & Cooper, 1991; Spielberger et al., 1991).

Although verbal expression of anger has the potential to result in the same negative interpersonal and health consequences as physical acts of anger and aggression, it is frequently the physical acts that are targeted as the primary concern. Eckhardt and Kassinove (in Kassinove, 1995) suggest that this tendency may be due to society's resistance toward censorship and insistence on "free speech" which results in a greater tolerance for verbal expression of anger. On the other hand, few individuals would argue that aggressive behavior directed toward other individuals is a societal problem. In fact, this type of behavior is likely to be labeled as "criminal behavior," an issue of ethical and legal consequences, not of psychotherapeutic treatment. This raises the question of the appropriateness of anger treatment for incarcerated individuals.

Anger is a common emotion that is experienced by most individuals on a regular basis. According to Averill (1983), the majority of individuals in his study indicated that they were mildly to moderately angry several times per day or at least several times per week. On the other hand, aggressive behavior (i.e., assault, homicide, rape, etc.) is relatively rare even among anger-prone individuals (Tsytsarev & Callahan, 1995). In fact, most interactions with others are nonviolent even for convicted murderers (Tsytsarev & Callahan, 1995). Hillbrand, Foster, and Hirt (1988) report that fewer than 2% of the individuals considered violence-prone engage in "violent crimes." Undoubtedly, as in the general population, inmates of jails and prisons could benefit from techniques to decrease dysfunctional levels of anger.

Suggested Treatment Options for Reducing Anger

DiGuiseppe et al. (1994) report that although little research exists, imaginal exposure, anger induction, and in vivo exposure procedures seem to be effective in the clinical setting. They provided several reasons for this suggestion. First, anxiety and anger are functionally and physiologically similar. That is, both seem to result in action by the individual against possible threat, and are associated with increased heart rate, respiration, and blood pressure. Since exposure techniques have been shown to be quite effective in treating anxiety (Barlow, Craske, Cerny, & Klosko, 1989), they would be expected to be effective for reducing anger. Second, results of a meta-analysis of available treatment outcome studies for anger indicated that treatments including some form of exposure to anger provoking stimuli reported the largest effect size (DiGuiseppe et al., 1994). And finally, exposure treatments have been found to be successful in a clinical setting for adolescents, men, women, and individuals involved in domestic violence, school fights, and gang related aggression.

For instance, in one case study, Kaufman and Wagner (1972) report substantial improvement in anger reduction using an anger exposure treatment for an adolescent male. Still, more theoretically and empirically based research is clearly needed to support the use of exposure as a component of anger reduction treatment.

In addition to an exposure component, some researchers suggest that a cognitive restructuring component to anger reduction be implemented. According to Eckardt and Kassinove (in Kassinove, 1995), a study of men with a tendency toward violent behavior in distressed marriages demonstrated more frequent irrational verbalizations in comparison to men in nondistressed marriages. In this study, men were exposed to overheard statements that were meant to be anger-provoking. Eckhardt and Kassinove (in Kassinove,1995) suggest that a critical component in the treatment of anger is the inclusion of training designed toward the reconstruction of the angry individual's evaluation of anger-provoking communication. They further discuss the importance of treatment for the reduction of aggressive communication, though this is often overlooked in the treatment of aggressive behaviors.

Ortony, Clore, and Collins (1988) emphasize the importance of understanding the relationship between cognitions and emotions in the treatment of anger. They agree that a combination of cognitive-behavioral techniques may decrease physiological arousal associated with anger and assist the individual in reevaluating anger-provoking events (i.e., from "absolutely awful" to "simply unpleasant").

In other words, anger often results from a perception or belief that an "avoidable, intentional, or wrongful act" has occurred (i.e., careless spending, failing to check the oil in the car, etc.) (Kassinove, 1995). As a result of this act, anger may result and be expressed in order to decrease the likelihood of the event in the future (Kassinove, 1995). If the individual had evaluated the situation of spending money or

neglecting the automobile as merely unfortunate, rather than absolutely awful, there would presumably be less anger (Kassinove, 1995).

It is apparent that excessive anger may result in negative subjective evaluation (i.e., people report that it does not feel good to be angry) and poor social evaluation (i.e., most individuals do not enjoy spending time with angry people and may state this fact). Then why does anger occur so frequently? Because the anger is often effective in reducing the frequency of the "absolutely awful" event (e.g., spending money), the reinforcing consequences of anger make it difficult to change (Kassinove, 1995). Anger may also be utilized successfully to maintain dominance in relationships (Kassinove, 1995).

Anger in the Inmate Population

Over the past several years, the number of inmates in United States jails has increased significantly (Morris, Steadman, & Veysey, 1997). McCorkle (1995) suggests that a large number of these inmates include individuals with mental disorders. In fact, according to the National Institute of Health (in McCorkle, 1995), as the number of patients in mental hospitals declined from 451,000 in 1965 to 177,000 in 1985, the number of incarcerated inmates grew from 210,000 to 420,000 during the same period. Although the reason for this occurrence is unclear, it is suggested that the deinstitutionalization of the mentally ill has led to the "criminalization of the mentally ill" (McCorkle, 1995). Adams (1985), on the other hand, suggests that the high incidence of mental illness in the inmate population may be attributable to a predisposition toward mental illness which is triggered by the incarceration experience. Unfortunately, few jails (particularly in rural settings) provide a comprehensive range of mental health services (Steadman, Barbera, &

Dennis, 1994). The fact remains that the majority of individuals in U.S. jails will eventually be reintegrated into the community following incarceration. Fortin (1993) argues that there is no better time to provide treatment than when the inmate can give sustained focus and attention to their difficulties outside of the environment in which the difficulties typically occur.

Ross and Fabiano (1985) suggest that cognitive and social skills deficits play a primary role in the offender's propensity toward criminality. They argue that these deficits include weak problem-solving ability, poor social role taking, low concrete reasoning, and cognitive distortions. It is also suggested that education regarding these deficits may lead to significant reductions in recidivism (Ross, Fabiano, & Ewles, 1988).

Few studies are available to assess the effectiveness of cognitive behavioral treatment to decrease anger in an inmate population. Stermac (1986) demonstrated a significant decrease in self-reported anger levels and an increase in adaptive coping strategies following a six-session cognitive-behavioral anger control treatment with forensic patients. In addition, Henning and Frueh (1996) utilized cognitive-behavioral techniques to decrease recidivism rates in inmates. Holbrook (1997) found a significant reduction in scores on the Vengeance scale in 26 male inmates identified as "Reactive Aggressors" following 6 weeks of 2-hour cognitive behavioral treatment.

Some research studies found less promising results. Chemtob, Novaco, Hamanda, and Gross (1997) provided a 12-week anger treatment with Vietnam War veterans suffering combat-related posttraumatic stress disorder (PTSD). They found few significant changes between groups regarding physiological or self-report measures. However, subjects did report improved anger control and less intense

anger reactions. Clearly, more research is needed in the utilization of short-term, effective, and cost-efficient treatment with the inmate population.

Deffenbacher and colleagues have completed several studies utilizing an eight-session cognitive behavioral anger treatment using undergraduate college students as subjects (Deffenbacher, McNamara, Stark, & Sabadell, 1990; Deffenbacher & Stark, 1992; Deffenbacher, Story, Brandon, Hogg, & Hazaleus, 1988; Deffenbacher, Story, Stark, Hogg, & Brandon, 1987; Deffenbacher, Thwaites, Wallace, & Oetting, 1994). This treatment is presented in a group format and combines systematic desensitization and cognitive restructuring to reduce overt and covert anger. Although the treatment effect sizes varied for the studies utilizing this treatment, the significant decreases in trait anger (TAS), most provoking anger situation (Anger Situation), anger expression scores (Anger In, Anger Out, Anger Control) and daily anger (Anger Log) were consistent across studies.

Directions of This Research

Limitations of Prior Research

This proposed study was designed to address three potential limitations of Deffenbacher et al.'s (1987, 1988, 1990, 1992, 1994) research. The first limitation involved the use of undergraduate college students as subjects. Although college students undoubtedly have difficulties with anger, the lack of research with other subjects compromises the generalizability of the results. In fact, Tafrate (in Kassinove, 1995) reported that over 60% of subjects in all of the studies he reviewed were undergraduate volunteers. This study utilized male inmates awaiting sentencing or serving their sentences in a rural county jail. Another potential limitation is

associated with the use of a multi-component treatment. It is difficult to determine if these components are equally effective in reducing different types of anger. Hazaleus and Deffenbacher (1986) suggest that the use of a cognitive component may interfere with therapeutic rapport. In other words, the client may feel as though the therapist is attempting to "change" him and is on the "side" of the person with whom he is angry (Hazaleus & Deffenbacher, 1986). This study compared both techniques (systematic desensitization and cognitive restructuring) to determine whether one component of the treatment was more effective than the other. Finally, as in the general population, many inmates could benefit from improved skills in reducing and controlling anger. Unfortunately, many facilities may have difficulty implementing eight or more group sessions which may be typical in a clinical setting. One factor may involve cost. Providing psychotherapy services may become expensive, particularly considering the wide range of difficulties with which the inmates may present. Another factor may involve the varied length of incarceration in this population. A lengthy group format may exclude individuals with a briefer sentence.

Comparison of Systematic Desensitization and Cognitive Restructuring

This proposed study compared the two primary components of Deffenbacher et al.'s (1987, 1988, 1990, 1992, 1994) cognitive-relaxation coping skills (CRCS) training with a rural male inmate population. This population was receiving no psychotherapeutic treatment other than crisis evaluation prior to the study. The individuals consisted of inmates awaiting sentencing and those with relatively brief sentences in a county jail. The first treatment, using systematic desensitization (SD, see Appendix A), consisted of five 1-hour sessions held once weekly for 5 weeks.

The second treatment group also met once weekly for 5 weeks and utilized the cognitive restructuring (CR, see Appendix B) component.

Both groups completed measures identifying trait, state, expression, physiological and situational anger levels. They also completed a treatment satisfaction measure following completion of the treatment groups to assess potential differences in treatment acceptability.

CHAPTER II

METHOD

Subjects

Recruitment of Subjects

Corrections Officers or the Jail Administrator informed the subjects that they would be given the opportunity to participate in groups for anger management and were escorted into the cafeteria. Four individuals indicated that they were not interested in participating prior to the recruitment phase. Once they arrived, the study was described (see Oral Recruitment Script, Appendix C) and the consent form was read aloud (see Appendices D and E). Subjects were informed that the purpose of the study was to learn more about how different types of conflict resolution therapies differ in their effectiveness. They were informed that by participating in the study, they would have the opportunity to learn more about how to resolve conflicts in their personal, social, and occupational lives. They were also informed that improving these skills may make it more likely that they would have their needs met in these areas. They were not offered any reduction in sentence, special privileges within the criminal justice system, or any monetary amount in exchange for participation in this study.

Individuals interested in participating signed the consent form and completed the baseline assessment battery. They were informed that only the researcher would have access to the subjects' last names. Procedures for obtaining informed consent

were approved by Western Michigan University Human Subjects Institutional Review Board (HSIRB) prior to implementation (see Appendices D and E).

Characteristics of Subjects

Thirty male individuals serving a sentence at Barry County Jail completed the study. Only those individuals with at least 10 weeks remaining of their sentence were included in the groups. Many individuals were unaware of the length of time remaining in their sentence during the recruitment phase.

Two individuals declined to participate following the completion of the study description. Fifty-four subjects signed a consent form indicating interest in participating in the study. Five individuals were released prior to the time the study began, and eight were released prior to completing the study. Six subjects were assigned to work release and did not complete the study. Three subjects were transferred to prison following sentencing. Two individuals were not able to complete the groups due to being in confinement during group time as a disciplinary action for aggressive behavior outside of group.

The age range was from 18 to 40 years of age. The mean ages of those who completed the study were 23.73 for the CR group and 25.06 for the SD group. There were no exclusion criteria based upon criminal charges; however, some individuals were excluded due to cell restrictions within the jail. Other exclusionary criteria included suicidal risk, psychotic behavior, or inability to speak or comprehend English. This judgment was made by the Jail Administrator, who determined which inmates would be appropriate for recruitment. Attempts were made to assist individuals who had difficulty completing the assessment forms due to poor reading skills. Each instrument was read aloud and checked for completion prior to the end of

each assessment. Several subjects had not answered all of the questions and were asked to answer them to the best of their ability.

Setting and Materials

Groups of 6 to 12 subjects met with the primary researcher in the jail cafeteria for group therapy. This room was selected by the Jail Administrator due to the availability of visual (although not auditory) surveillance. The room was chosen for safety purposes, although distractions and interruptions were frequent. One difficulty involved the women's wing, which was accessible only through the cafeteria. Corrections officers frequently entered the room to tend to the women inmates or to transport female inmates to and from their cells. Another issue involved the fact that the entrance to the Jail Administrator's office was inside the cafeteria with an observation window. He agreed to disrupt the groups as infrequently as possible and did not use his office during group time. Subjects were seated in chairs within the room in a circular formation. Although corrections officers were informed that they would be notified of any aggressive behavior or discomfort experienced by the researcher, this did not occur during the study.

During the baseline assessment process, subjects were provided with a pencil, a clipboard, and the informed consent sheet. The subjects were informed that the study would consist of several self-report measures to be completed 5 weeks prior to the beginning of the study (baseline), the day of the first treatment group (pretreatment), and following completion of the study (posttreatment). They were instructed not to place their names on the assessment materials. They were informed that they could revoke their consenting status at any time during the study. The

procedures for obtaining consent complied with HSIRB guidelines prior to implementation.

The baseline, pretreatment, and posttreatment assessment batteries each consisted of the State Trait Anger Expression Inventory (STAXI; Spielberger, 1996). Subjects also completed Anger Symptom and Anger Situation measures (Deffenbacher, Demm, & Brandon, 1986; Deffenbacher et al., 1988). Throughout the study, subjects completed Anger Log sheets on a weekly basis (Hazaleus & Deffenbacher, 1986). Each item in the assessment battery was numbered to indicate the individual who completed the instrument. Only the researcher was aware of the number, which identified each subject. Following the treatment, each subject completed the Satisfaction measure (Appendix H).

Groups were audio-taped using a small tape recorder to determine adherence to treatment protocol. Subjects were instructed not to use last names during the treatment groups. They were also informed that the purpose of the taping was to determine treatment integrity, and it would not be utilized for identification of the subjects.

Measures

The measures were selected from the assessment battery utilized by Deffenbacher and colleagues in various anger treatment studies (Deffenbacher et al., 1990; Deffenbacher, Oetting, Huff, Cornell, & Dallanger, 1996; Deffenbacher, Oetting, Lynch, & Morris, 1996; Deffenbacher et al., 1994). Each component was selected to target different, although possibly correlated, measures of anger (Deffenbacher et al., 1990).

Structured Clinical Interview for *DSM-IV*

Following the recruitment phase, individual subjects met with the researcher to complete the Structured Clinical Interview for *DSM-IV*: Patient Questionnaire (First, Gibbon, Williams, & Spitzer, 1996) that was administered by the researcher. This measure was selected to evaluate potential mental health issues and provide descriptive information pertaining to the sample. Scores on the SCID-PQ were not used as exclusionary criteria or to obtain a specific diagnosis. The SCID-PQ was a computerized version of the SCID, which instructs the subject to respond to various questions in a structured interview format. Questions were read aloud by the researcher and responses were entered into the computer. The SCID-PQ was completed during the 5-week waiting period prior to treatment. Each week, two or three inmates who were enrolled in the study met with the researcher individually to complete the SCID-PQ. Reliability has been shown to be .61 for current diagnosis and .68 for lifetime diagnosis.

The State-Trait Anger Expression Inventory

State anger was assessed by the 10-item State Anger portion of the State-Trait Anger Expression Inventory (STAXI; Spielberger, 1996). The S-Anger items are rated on a 4-point Likert scale (1 = not at all, 4 = very much so). This measure addressed subjective experience of anger at the time of completing the STAXI. Internal consistency reliabilities were .93 for both genders.

General or trait anger was measured by the T-Anger section of the STAXI (Spielberger, 1996) in which the subject rated general experience of anger using 10-items on an Likert scale (from 1 = almost never to 4 = almost always). Internal

consistency reliabilities range from .84 to .87 for the females and males, respectively (Spielberger, 1996).

The tendency to express anger toward other individuals and the tendency to suppress angry feelings was assessed using the Anger In and Anger Out scales of the STAXI (reliability .73 to .84). A general index of expressed anger regardless of the direction of expression was measured by the Anger Expression scale. Tendency to control the expression of anger was demonstrated by the Anger Control scale. Reliability measures were not reported for the Anger Expression or Anger Control scales in the manual.

Anger Log, Anger Symptom, and Anger Situation Measures

Person-specific anger (i.e., characteristics of anger unique to the individual) was assessed by Anger Log, Anger Symptom, and Anger Situation measures (see Appendices F and G; Deffenbacher et al., 1986; Deffenbacher et al., 1987; Deffenbacher et al., 1988; Hazaleus & Deffenbacher, 1986). The Anger Log required the individual to record the most anger-provoking incident of each day and rate it according to its anger intensity (0 = no anger, 100 = maximum anger ever experienced). The Anger Symptom measure involved the self-reported physiological index associated with severity of anger arousal (0 = absence of symptom, 100 = extremely severe). The Anger Situation assessment asked the individual to rate the current, most anger-provoking situation in their lives (0 = no anger, 100 = maximum anger ever experienced). Deffenbacher et al. (1988) found good stability and test-retest reliability measures of .85 and .81 for the Anger Symptom and Anger Situation measures, respectively.

The Satisfaction Questionnaire

The Satisfaction Questionnaire was an eight-item survey prepared by the researcher and given to each subject following the last treatment group (see Appendix H). Subjects rated the extent to which they were satisfied with the techniques they acquired in the group in which they participated.

Design and Procedure

Volunteers who demonstrated an interest in participating were informed of the time commitments required in the study, as well as the baseline, pretreatment, and posttreatment assessment procedures. They were informed that they would be assigned to one of two treatment groups directed at reducing anger.

All volunteers completed the baseline assessment battery at the time of the recruitment. Five weeks later, they completed the battery again, in the 30 minutes prior to participation in the initial treatment group session. This battery was re-administered following the final group session.

All individuals who had completed the assessment procedure were assigned to either relaxation and systematic desensitization (SD) or cognitive restructuring (CR) group therapy. Only one type of treatment group was held at one time to reduce the likelihood of subjects discussing the techniques reviewed in group. The initial treatment (CR) was randomly selected and all available subjects participated in the group. Following groups were selected in an attempt to keep group numbers balanced. Treatment consisted of five weekly, 1-hour group sessions. The researcher, a fourth-year doctoral student and a limited licensed psychologist, conducted the groups. This individual had group therapy experience and completed a professional

education program in cognitive behavioral and short-term interventions for anger and aggression.

Each session was audio-taped for supervision purposes and to assess adherence to the treatment protocol. Supervision was provided by a fully licensed psychologist who has had experience leading groups on anger control for males on probation, and was familiar with the rural community mental health population.

The systematic desensitization group (SD) followed Deffenbacher et al.'s (1987), Deffenbacher et al.'s (1988) and Deffenbacher et al.'s (1990) cognitive-relaxation coping skills (CRCS) treatment format with the removal of the cognitive restructuring component. During sessions one and two, the relationship between the emotion of anger and the physiological experience was discussed. In addition, participants were trained in progressive relaxation, deep breathing, cue-controlled relaxation, and relaxation imagery. Homework included practice of skills acquired and tracking of anger episodes. Sessions three, four, and five included the development and visualization of person-specific anger arousing scenes. Visualization was utilized while the group members were in a relaxed state. The scenes progressed from (1) a low to moderate anger provoking situation, (2) a moderate to high angering event, and (3) the highest level of anger imaginable. The homework relaxation and tracking assignments continued throughout the treatment.

The cognitive restructuring group (CR) also followed the format of Deffenbacher et al.'s (1987), Deffenbacher et al.'s (1988), and Deffenbacher et al.'s (1990) cognitive-relaxation coping skills (CRCS) treatment; however, systematic desensitization component was removed. Sessions one and two, included a discussion of the cognitive aspects of anger arousal and the introduction of anger related distortions. These cognitive distortions included: "catastrophizing, demanding or

coercive thoughts, overgeneralization, inflammatory labeling, and misattributions." Homework, as in the first group, included practicing the skills discussed and tracking episodes of anger. In groups three, four, and five, group members were encouraged to discuss angering events similar to those in the other group: (a) a low to moderate anger provoking situation, (b) a moderate to high angering event, and (c) the highest level of anger imaginable. In this case, however, the group members incorporated a cognitive evaluation of the angering event, including cognitive distortions and implementation of positive self-talk. Recording in the Anger Log continued throughout treatment as in the systematic desensitization group.

Once the sessions were completed, two research assistants unfamiliar with the study rated the audio-tapes based upon their adherence to the components in Deffenbacher et al.'s (1990) CRCS treatment manual. Both research assistants were graduate students in the Counselor Education and Counseling Psychology program completing their practicum prior to obtaining their Master's degree. The research assistants rated the tapes individually without access to the ratings of the other research assistant.

Data Analysis

The study utilized a balanced two-group treatment design. Data analysis involved the computation of independent samples *t* tests to assess potential differences between groups at the baseline, pretreatment, and posttreatment phases of the study. Independent samples *t* tests were used to assess differences between groups regarding number of items endorsed on the SCID for each diagnostic category. Paired samples *t* tests were also utilized to test for a baseline to pretreatment difference for the sample of subjects who participated in the study.

Independent samples *t* tests were used to test potential differences between scores on the Satisfaction measure and the Anger Log scores. Paired-samples *t* tests were utilized to assess the differences obtained between raters of adherence to treatment protocol. A confidence level of .05 was utilized in the analyses. The Levene's test was utilized to verify homogeneity of variances for *t* tests. The separate-variance *t* test for means was utilized for differences when variances were heterogeneous. Once the assumption of homogeneity of regression slopes was verified, univariate ANCOVAs were computed with pretreatment scores used as the covariate to determine treatment effects. A Bonferroni F was used to account for multiple comparisons. A Repeated Measures ANOVA was computed using the eight repeated measures (Trait, State, Anger In, Anger Out, Anger Expression, Anger Control, Anger Situation, Anger Symptom) to identify significant differences between the CR and SD groups and pretreatment to posttreatment differences.

CHAPTER III

RESULTS

Baseline, Pretreatment, and Posttreatment Differences

Independent samples *t* tests demonstrated no significant differences between the cognitive restructuring group and the systematic desensitization group at the baseline or pretreatment phase of the study on most of the measures or scales administered (S-Anger, T-Anger, Anger In, Anger Out, Anger Expression, Anger Situation, or Anger Symptom; see Table 1). The difference between the SD and CR group at the posttreatment phase on the Anger Control measure was significant. Another significant difference was found between the two groups at the posttreatment phase of the study on the Anger Situation measure ($p = .002$). Paired samples *t* tests demonstrated no significant differences between the baseline and the pretreatment scores obtained on any of the measures (Table 2).

Differences in Satisfaction

Although both groups seemed to indicate satisfaction in the treatment they received, independent samples *t* tests found no significant difference between groups on the Treatment Satisfaction measure (Table 1).

Table 1

Differences Between Groups

Measure	Treatment Condition: Cognitive Restructuring Mean	Cognitive Restructuring St. Dev.	Systematic Desensitization Mean	Systematic Desensitization St. Dev.	Mean Difference (Significance)	ANCOVA *F* (Significance)
S-Anger						
Baseline	17.30	8.05	15.47	5.44	1.67 (.512)	.269 (.608)
Pretreatment	18.53	6.73	15.47	7.57	3.07 (.251)	
Posttreatment	14.93	3.97	13.67	6.49	1.27 (.524)	
T-Anger						
Baseline	24.73	6.83	23.00	6.28	1.27 (.524)	.330 (.571)
Pretreatment	24.20	5.67	23.13	7.17	1.73 (.480)	
Posttreatment	21.80	5.76	21.60	7.11	1.07 (.660)	
Anger-In						
Baseline	19.80	3.59	19.53	6.51	.27 (.89)	2.250 (.145)
Pretreatment	18.67	3.04	19.73	5.39	−1.07 (.510)	
Posttreatment	19.53	2.17	18.33	3.85	1.20 (.302)	
Anger-Out						
Baseline	19.93	4.11	17.6	4.73	2.33 (.161)	.577 (.454)
Pretreatment	19.73	4.18	18.4	4.24	1.33 (.393)	
Posttreatment	18.80	4.18	17.0	4.26	1.80 (.252)	
Anger Expression						
Baseline	36.64	8.20	31.87	10.57	4.78 (.187)	3.610 (.068)
Pretreatment	35.64	6.55	32.27	10.84	3.38 (.323)	
Posttreatment	35.43	7.05	29.73	9.85	5.70 (.087)	

Table 1—Continued

Measure	Treatment Condition: Cognitive Restructuring Mean	Cognitive Restructuring St. Dev.	Systematic Desensitization Mean	Systematic Desensitization St. Dev.	Mean Difference (Significance)	ANCOVA *F* (Significance)
Anger Control						
Baseline	19.07	4.57	21.27	4.23	−2.20 (.182)	3.610 (.068)
Pretreatment	18.67	4.29	20.87	5.125	−2.20 (.213)	
Posttreatment	18.53	2.47	21.67	4.86	−3.13 (.037)*	
Anger Situation						
Baseline	72.10	24.55	65.27	30.76	6.83 (.507)	10.220 (.004)*
Pretreatment	73.20	26.63	62.20	23.96	11.00 (.244)	
Posttreatment	83.33	23.73	53.67	23.71	29.67 (.002)*	
Anger Symptom						
Baseline	63.60	29.86	53.40	26.64	10.20 (.332)	1.884 (1.81)
Pretreatment	56.20	30.66	65.67	25.50	−9.47 (.366)	
Posttreatment	65.33	22.95	50.00	27.71	15.33 (.110)	
Satisfaction	28.53	4.22	28.67	3.18	−.133 (.923)	

* $p \leq .05$

Table 2

Differences Between Baseline and Pretreatment Scores

Measure	Mean	St. Dev.	Significance
S-Anger			
Baseline	16.30	6.80	.588
Pretreatment	17.00	7.20	
T-Anger			
Baseline	23.87	6.51	.800
Pretreatment	23.67	6.38	
Anger-In			
Baseline	19.67	5.17	.524
Pretreatment	19.20	4.33	
Anger-Out			
Baseline	18.77	4.52	.637
Pretreatment	19.07	4.14	
Anger Expression			
Baseline	34.27	9.49	.835
Pretreatment	34.00	8.89	
Anger Control			
Baseline	20.17	4.47	.576
Pretreatment	19.77	4.78	
Anger Situation			
Baseline	68.68	27.56	.825
Pretreatment	67.70	25.51	
Anger Symptom			
Baseline	60.93	28.12	.681
Pretreatment	58.50	28.28	

Treatment Effects

Homogeneity of regression slopes was confirmed prior to computing univariate ANCOVAs. Eight ANCOVAs were computed using pretreatment scores as the covariate to determine potential treatment effects (Table 1). The only significant difference found between pretreatment to posttreatment was for the

Systematic Desensitization group on the Anger Situation measure (p = .004). The difference was greater than one standard deviation, suggesting that the difference may be clinically significant as well as statistically significant. The Repeated Measures ANOVA (Table 3) also found significant treatment effects for the Anger Situation Measure. It also demonstrated differences between the pretreatment and posttreatment means on the Trait Anger and Anger Out measures. Neither the ANCOVA or the Repeated Measures ANOVA demonstrated a significant treatment effect for the Anger Control subscale.

Adherence to Treatment Protocol

Paired samples *t* tests on the coding data demonstrated adequate adherence to the treatment protocol and no significant differences in the scores obtained between raters (Table 4).

Anger Log Results

Independent samples *t* tests found no significant differences between groups on the Anger Log measure (Table 5). There were no significant differences found within groups over time.

SCID Descriptive Data

Many of the subjects endorsed items on the Structured Clinical Interview for *DSM-IV* suggesting the potential for mental health diagnosis (Table 6). The diagnoses, which seemed to appear most frequently, included current and past Depression, past Manic episodes, Alcohol, and Drug Abuse/Dependence. In fact, although reason for incarceration was not established as an exclusionary criteria,

inmates repeatedly reported incarceration for substance-related offenses. There were no significant differences found between groups regarding number of items endorsed in any specific diagnostic category.

Table 3

Repeated Measures ANOVA Data

Measure	*F* Obtained	Significance
S-Anger		
Pre-Post	.292	.593
Treatment	1.146	.294
T-Anger		
Pre-Post	9.689	.004
Treatment	.077	.783
Anger-In		
Pre-Post	.132	.719
Treatment	.003	.955
Anger-Out		
Pre-Post	4.834	.036
Treatment	1.176	.287
Anger Expression		
Pre-Post	1.279	.268
Treatment	2.553	.121
Anger Control		
Pre-Post	.402	.531
Treatment	3.225	.083
Anger Situation		
Pre-Post	.037	.850
Treatment	6.587	.016
Anger Symptom		
Pre-Post	.020	.887
Pretreatment	2.609	.117

Table 4

Differences Between Raters on Treatment Coding Means

Group/Rater	Mean	St. Dev.	Significance
Group One			
Rater One	2.96	.20	.21
Rater Two	2.87	.40	
Group Two			
Rater One	2.81	.40	.17
Rater Two	2.91	.28	
Group Three			
Rater One	2.94	.25	.66
Rater Two	2.90	.30	
Group Four			
Rater One	2.83	.38	.32
Rater Two	2.89	.31	
Group Five			
Rater One	2.98	.15	1.00
Rater Two	2.98	.15	

Table 5

Anger Log Scores Between Groups

AngerLog/Session	Systematic Desensitization	Cognitive Restructuring	Significance
Session 2	67.06	74.89	.15
Session 3	70.94	69.41	.75
Session 4	73.10	69.35	.35
Session 5	66.04	73.08	.15

Table 6

Items Endorsed on the Structured Clinical Interview for *DSM-IV*

Diagnostic Category	Items Endorsed	Systematic Desensitization	Cognitive Restructuring
Current Depression	≥ 2	60%	46%
Past Depression	≥ 2	46%	53%
Current Manic	≥ 2	33%	20%
Past Manic	≥ 2	60%	80%
Panic w/o Agoraphobia	≥ 2	46%	53%
Panic w/ Agoraphobia	≥ 2	13%	26%
OCD	≥ 2	46%	40%
Current Generalized Anxiety	≥ 2	46%	47%
Past Generalized Anxiety	≥ 2	0%	7%
Delusions	≥ 3	66%	66%
Hallucinations	≥ 3	26%	33%
Somatization	≥ 2	20%	7%
Alcohol	≥ 2	66%	80%
Drugs	≥ 1	73%	86%
Anorexia/Bulimia	≥ 2	20%	20%
PTSD	≥ 1	53%	80%
Body Dysmorphic	≥ 1	46%	46%

CHAPTER IV

DISCUSSION

Outcomes of This Research

This was a dismantling study designed to compare the effectiveness of the cognitive restructuring and the systematic desensitization components of Deffenbacher et al.'s (1987, 1988, 1990, 1992, 1994) cognitive relaxation coping skills (CRCS) treatment of anger. This study utilized an inmate population as opposed to an undergraduate college population. Each group met for 5 weeks in the jail setting. There was no significant differences found between the groups from baseline to pretreatment phase on any of the measures.

The systematic desensitization group demonstrated a statistically significant improvement on the Anger Situation measure from pretreatment to posttreatment and in comparison to the cognitive restructuring group at posttreatment. This measure asks the subject to report the most anger-provoking incident he was experiencing at the time. The systematic desensitization group also demonstrated statistically significant higher scores in Anger Control in comparison to the cognitive restructuring group at the posttreatment assessment. A significant difference was found between pretreatment and posttreatment assessment on the Trait Anger subscale and the Anger Out subscale of the STAXI.

Both groups reported satisfaction with treatment received. Neither group demonstrated higher satisfaction in comparison to the other group. Analysis of coding data indicated adherence to both treatment protocols.

Clinical Implications

One clinical consideration that could be obtained from this study is the possibility that the atmosphere in the county jail may not be conducive to this type of treatment for many of the inmates. In the setting provided, most inmates were not incarcerated for a length of time that would allow for several weeks of treatment. One consideration may be to utilize more than one session per week or longer sessions to target those individuals with shorter incarceration times. It is also important to consider confidentiality issues. Although safety precautions are important when working with inmates, a setting conducive to therapy could have improved the ability of the inmates to acquire the techniques. Another concern involves the relatively high number of items endorsed on the SCID-PQ. The inmates may have exaggerated their symptoms in self-report. It is also possible that the inmates were experiencing numerous psychological symptoms which were not addressed in the anger treatment groups. This may have influenced the ability of the subjects to acquire the techniques discussed in the treatment groups.

Limitations of This Research

Several important issues arise from the results of the research. The primary issue to be addressed involves the lack of significant treatment effects on several measures. The groups did not differ on most measures from the baseline to the pretreatment or from the pretreatment to the posttreatment assessment. This finding

may be attributable to (a) insufficient measurement sensitivity, (b) anger disposition being slower to change and the nature of situational variables, (c) limited treatment effectiveness, and/or (d) insufficient power.

Insufficient Measurement Sensitivity

Many of the measures, Anger Log, Anger Situation, and Anger Symptom, were obtained with permission from Deffenbacher and colleagues who utilized the measures in their research program with encouraging results when used in an anger management program with undergraduate college students with sample sizes over 100. The one significant difference found in this study was utilizing Deffenbacher et al.'s (1987, 1988, 1990, 1992, 1994; see page 16 for description, Appendix G for measure) Anger Situation Inventory in which subjects rate the most anger-provoking incident they were currently facing. At the time of the posttest, the systematic desensitization group rated their most anger-provoking incident significantly lower than the cognitive restructuring group. In fact, the change for the systematic desensitization group from pretest to posttest was also significant. Since the groups did not differ significantly at the initial assessment, nor following the 5-week baseline phase, it would suggest that the difference may be due to a treatment effect.

The STAXI is a widely utilized and validated measure which has demonstrated mixed results in research with other clinical populations. Chemtob et al. (1997) provided a 12-week anger treatment with Vietnam War veterans suffering combat-related posttraumatic stress disorder (PTSD) and obtaining an score of above 90 on an Anger Scale. They did not find significant changes in psychophysiological measures (heart rate, systolic, diastolic or arterial blood pressure) or for measures of anger provocation, dispositional anger, or trait anger (as measured by the STAXI).

However, they did report a greater capacity to control anger and reported less intense anger reactions. This significant difference was found with the Anger Control subscale of the STAXI. This study also found a difference between groups on the Anger Control subscale of 3.13 points with the systematic desensitization group demonstrating a higher rating in ability to control anger ($p = .037$) at the posttreatment phase in comparison to the cognitive restructuring group. This difference, however, was not supported in the ANCOVA or Repeated Measures ANOVA analyses. This suggests that although the difference between groups at the posttreatment phase was statistically different, it is not clear that the difference is due to a treatment effect. Neither analysis demonstrate a difference suggesting that the change between pretreatment to posttreatment for Anger Control was significant.

Anger as a Characteristic and Situational Variables

The second issue involves anger as a characteristic difficult to change and the potential difficulty associated with situational variables. Robins and Novaco (1999) suggest that current psychotherapeutic methods often used for reducing anger may not be effective. They state that the act of encouraging angry individuals to report events and situations that occurred at the time of the anger arousal act can reinforce the belief that anger has a specific cause. They further purport that acknowledging a cause for the anger can lead the angry individual to believe that their anger is justifiable and in response to a specific "wrong" which had occurred. Robins and Novaco further emphasize that angry individuals are not adequate or objective observers of their own behavior, let alone the anger-provoking situation. Their identified "cause" carries the burden of responsibility. Angry individuals may find it difficult to recognize other factors, such as familial stressors, conflicts at their

employment, or the effect of their "world-view" (prejudice, distrust of authority, or negative self-concept). Robins and Novaco describe this as "cognitive myopia"—leading to a belief that anger is "justified, uncontrollable, and inevitable." They further suggest that anger difficulties can result from long-term exposure to adverse situations or trauma. Angry individuals may tend to frequent settings in which high levels of conflict are common, increasing the likelihood of anger-provoking experiences.

The possibility of situational variables affecting the data is another factor that deserves consideration. A high percentage of the situations included on the Anger Log involved disputes with other inmates or corrections officers. The majority of the inmates described incarceration as a high-stress experience with frequent conflictual situations. This does not seem to fit Fortin's (1993) argument, described in the Introduction (p. 7), that the incarcerated individual has the opportunity to give sustained focus and attention to their difficulties without the interference of the outside environment.

Limited Treatment Effectiveness

There are many factors which must be considered when discussing the effectiveness of the treatment employed: the treatment itself, the length of treatment, the appropriateness of the technique and population, and other variables which may have affected the treatment effect.

The data obtained from the raters suggest that the treatments adequately matched Deffenbacher et al.'s (1987, 1988, 1990, 1992, 1994) treatment protocol. The raters were both graduate Counseling Psychology students nearing the end of their final year practicum. This suggests that the treatments were delivered as

planned. The group therapist was a limited licensed psychologist completing her internship who had completed a seminar on cognitive-behavioral treatments of anger.

The length of treatment may be an important consideration. Deffenbacher et al. (1987, 1988, 1990, 1992, 1994) found results using the combined technique with college students over an 8-week treatment duration. It is possible that 5 weeks was too short to achieve treatment results, especially with a population likely to have serious anger problems. Holbrook (1997) completed a 6-week cognitive-behavioral anger management training program with prison inmates (in Megargee & Hokanson, 1970). He utilized 26 inmates who met an inclusion criteria of past assaultive behavior and a categorization as "Reactive Aggressors." The groups completed 6 weeks of treatment of 2 hours per week duration and scored significantly lower on the Vengence scale following the treatment. Although they met for 6 weeks (comparable to this study), the group sessions were twice as long per week.

The appropriateness of the treatment technique must be considered. As mentioned earlier in the discussion, Robins and Novaco (1999) suggest that this type of treatment may actually reinforce the belief that anger is "justifiable." Although this is a consideration, cognitive restructuring and exposure methods have been utilized in other studies with positive results as demonstrated by a reduction in self-reported anger. In addition, the study did demonstrate a reduction in the systematic desensitization group's rating of highest anger experienced following the treatment. There was also a difference in favor of the systematic desensitization group over the cognitive restructuring group at posttreatment in ratings of anger control. These findings would support the appropriateness of systematic desensitization with the inmate population.

Many of the studies reviewed utilized subjects who presented with anger as a difficulty. Although the subjects demonstrated significant anger issues, they were not selected or excluded based upon anger difficulties or anger-related incarceration. Despite this, the mean scores obtained on the S-Anger, T-Anger, Anger In, and Anger Out measures were higher in this population (16.3, 23.87, 19.67, and 18.77, respectively) than in the normative sample of prison inmates (15.06, 21.66, 18.06, and 16.52, respectively) obtained by Spielberger (1996). They also demonstrated Anger Control scores lower than the inmate normative sample (20.17 for this study, 24.79 prison inmate sample; Spielberger, 1996).

Other variables which may have affected the treatment include the disruptions during the group sessions. Despite obvious efforts made by the staff to keep disruptions to a minimum, corrections officers were required to transport female inmates through the cafeteria (where groups were held) to and from their cells. There were also occasional interruptions by office staff and maintenance workers. It was clear to the inmates that they were being observed by corrections officers for safety purposes. In addition, the sessions were audio-taped to test for adherence to the treatment manual. Despite the fact that only first names were utilized and confidentiality was reviewed, the interruptions and security observation could have significantly influenced the treatment effectiveness.

Insufficient Power

Another issue involves power and sample size. It is possible that some of the results may have reached a level of significance with a larger sample size. Although initial data were gathered on 54 subjects, 24 (44%) of those subjects did not complete the study. One issue involved the 5-week baseline phase. Since the inmates

were incarcerated in a rural county jail, as opposed to a prison, most were held for brief sentences or were awaiting sentencing. Many were unsure how much time was remaining in their sentence prior to completing the initial measures. In addition, many subjects were sentenced and released, transferred to prison, or allowed to participate in work release. This led to a significant loss of subjects throughout the study. In fact, in consideration of the length of treatment in the study, many subjects would not have been available to complete more than five sessions even if they had been available.

Directions for Future Research

The dismantling approach of this study did not demonstrate a significant difference between the cognitive restructuring component or the systematic desensitization component on most of the measures utilized. Although the systematic desensitization group did seem to benefit more from treatment in comparison to the cognitive restructuring group, they may have benefited in a greater degree if more treatment sessions were utilized. Again, with this population, numerous treatment sessions may have been difficult, so increasing the number of groups per week may have allowed more subjects to complete more total sessions.

It is also possible that the inmate population may have benefited from the combined treatment program (both systematic desitization and cognitive restructuring) used by Deffenbacher et al. (1987, 1988, 1990, 1992, 1994). Future research comparing the treatment program to a control condition may provide information regarding the effectiveness of the combined technique with the inmate population.

Conclusions

This research suggests that behavioral techniques (relaxation and systematic desensitization) in comparison to cognitive techniques (cognitive restructuring) may be more effective in reducing some components of anger with an inmate population. Despite the suggestion by Hazaleus and Deffenbacher (1986) that this population may find cognitive techniques aversive, this study demonstrated equal satisfaction with both types of treatment.

It remains unclear whether the jail setting is appropriate for short-term effective anger-management treatment. What is clear is that many inmates have significant difficulties with anger control and are prone to frequent settings in which conflict is likely. It is also a good possibility that these individuals would not voluntarily receive mental health treatment following incarceration. Despite this, each inmate was awaiting his return to the community. This research suggests that inmates do experience high anger levels that may be resistant to change. With each passing week, inmates are released back into the community. It is vital that their anger management problems are not ignored.

Appendix A

Session by Session Outline of Systematic Desensitization

Session by Session Outline of Systematic Desensitization (SD)

The procedures in this outline have been taken from the research manual for the cognitive and relaxation anger reduction program of Deffenbacher, McNamara, Stark, and Sabadell (1990). The components that imply a cognitive technique have been removed.

I. Session 1.

A. Introduction of group members and discussion of their problems with anger and motivation for participation.

B. Cover issues of confidentiality.

C. Introduction to Systematic Desensitization (SD).

1. Describe anger in terms of physiological and emotional arousal. Use earlier group examples of anger to illustrate.

2. Distinguish the emotional state of anger from aggressive behavior.

3. Discuss treatment rationale and overview of group goals.

a. Anger as emotional/physiological arousal.

b. Gaining control of the emotional arousal will decrease anger levels and allow the person to cope with the situation more constructively.

c. Learning ways to identify personal, physiological, and emotional components of anger and changing them.

d. Importance of in-session and out-of-session (involving real events) practice.

D. Orientation to relaxation.

1. Use discussion of participants' anger experiences to highlight the existence of physiological and emotional arousal.

2. Link relaxation to reductions in emotional and physiological arousal.

3. Description of progressive relaxation exercises and demonstration of tension/release of muscle groups (see Appendix J).

4. Questions and discussion regarding gum chewing, contact lenses, glasses, physical problems, and other issues.

E. Therapist guided progressive relaxation with tension-release of each muscle group once.

F. Discussion of reactions and therapist answers questions regarding the progressive relaxation.

G. Homework.

1. Relaxation practice. Out-of-session practice described as means with which to acquire the ability to decrease physiological and emotional aspects of anger arousal. Practice progressive relaxation at least once daily for 5 to 7 days and record reactions. Bring relaxation recording to the next session (see Appendix L).

2. Identify past relaxing experience for use as an imaginal relaxation scene. Identify and record two scenes which involve anticipating, waiting for, or thinking about an upcoming angering event—including external and internal (emotional, physiological, and behavioral urge information) details of the situations. Scenes should be approximately 50 on a 100 point anger scale.

3. Anger Log. Members self monitor angering situations as well as their emotional and physiological reactions to those events. Members record on the Anger Log all reactions > 40 on a 100 point scale (see Appendix G). Bring Anger Log to next session.

II. Session 2.

A. Discussion of homework.

1. Collect Anger Logs, relaxation recordings, and review participants' experiences. Emphasize the following:

a. Importance of personal awareness as basis for increased self control.

b. Use of homework examples to encourage participants to increase their awareness of personal, affective, and physiological components of anger.

2. Assess development of skills and problems with relaxation, (e.g. lack of relaxation practice, difficulty relaxing certain areas, falling asleep, etc.).

B. Description of signaling procedure, i.e., raising one finger or hand so that it is visible to the therapist.

C. Relaxation image construction.

1. Therapist modeling of relaxation image construction. Include the concrete situational aspects of the scene as well as the various sensory and emotional components of the experience.

2. Make sure each member has constructed an image that reflects a specific moment in time in which he felt relaxed. Avoid the use of fantasy (i.e., situations never encountered), composite (i.e., situations composed of several events), and sexual scenes as they pose problems for visualization.

D. Relaxation training.

1. Therapist-guided progressive relaxation with tension-release of each muscle group repeated once.

2. When all or most participants signal relaxation, the therapist presents the preparing-for-anger events in imagination, having individuals experience anger arousal at about the 50-60 level (on a 100 point intensity scale) for 30-40 seconds. The therapist then cues the client to engage in visualization of relaxation scene and tension and release of tense muscles.

3. Repeat process 4-6 times, alternating use of the two anger scenes. Alternating is done by labeling scenes as scene 1 and scene 2 and then instructing clients to visualize scene 1 on one trial and scene 2 on another. In the first two trials, the therapist specifically directs clients through identification of tense muscle groups. In later repetitions, the therapist begins to fade instructions and allow the subjects to identify remaining tension.

E. Homework.

1. Continue relaxation exercises and imagery.

2. Continue self-monitoring anger reactions and focus on physiological and emotional aspects.

3. Identify and develop two moderate anger scenes (60-70 on a 100 point scale) that reflect real life experiences of the group member.

III. Session 3.

A. Discuss homework activities.

B. Discussion of moderate anger scenes.

1. The scenes will be discussed as occurring on a 60-70 level (on a 100 point scale). As in previous session, scenes are labeled as Scenes 1 and 2 for alteration during relaxation training.

C. Relaxation Training.

1. Therapist-guided relaxation followed by a hand signal once relaxation is achieved. Therapist then cues the moderately angering scenes and, once most people have achieved anger visualization (hand signal), encourage members to continue to experience the anger for the next 30-40 seconds. Therapist then instructs the individual to turn off the anger scene and cues relaxation by visualization and muscle relaxation.

2. As before, scenes 1 and 2 are alternated in the rehearsal. Therapist continues to be specific in instructions and models the steps in the first two presentations before moving to more general instructions in later presentations.

3. Discussion of rehearsal includes reinforcement of desired changes and focus on problematic issues.

D. Homework.

1. Continued relaxation and relaxation log recording.

2. Continued self-monitoring on Anger Log and application of relaxation skills to stressful or angering situation.

3. Identify and develop two angering events (60-80 level on a 100 point scale) in which the person has not resolved the problem and/or the anger remains after the event is over).

IV. Session 4.

A. Discuss homework activities and investigate the application of relaxation skills to real-life circumstances.

B. Discussion of unresolved anger scenes.

1. The scenes will be discussed as occurring on a 60-70 level (on a 100 point scale). As in previous session, scenes are labeled as Scenes 1 and 2 for alteration during relaxation training.

C. Relaxation Training.

1. Therapist-guided relaxation followed by a hand signal once relaxation is achieved. Therapist then cues the unresolved angering scenes and, once most people have achieved anger visualization (hand signal), encourage members to continue to experience the anger for the next 30-40 seconds. Therapist then instructs the individual to turn off the anger scene and cues relaxation by visualization and muscle relaxation.

2. As before, scenes 1 and 2 are alternated in the rehearsal. Therapist continues to be specific in instructions and models the steps in the first two presentations before moving to more general instructions in later presentations.

3. Discussion of rehearsal includes reinforcement of desired changes and focus on problematic issues.

D. Homework.

1. Continued relaxation and relaxation log recording.

2. Continued self-monitoring on Anger Log and application of relaxation skills to stressful or angering situation.

3. Identify and develop two highly angering events (75-100 level on a 100 point scale).

V. Session 5.

A. Discuss homework activities and investigate the application of relaxation skills to real-life circumstances.

B. Discussion of highly angering events.

1. The scenes will be discussed as occurring on a 75-100 level (on a 100 point scale). As in previous session, scenes are labeled as Scenes 1 and 2 for alteration during relaxation training.

C. Relaxation Training.

1. Therapist-guided relaxation followed by a hand signal once relaxation is achieved. Therapist then cues the unresolved angering scenes and, once most people have achieved anger visualization (hand signal), encourage members to continue to experience the anger for the next 30-40 seconds. Therapist then instructs the individual to turn off the anger scene and cues relaxation by visualization and muscle relaxation.

2. As before, scenes 1 and 2 are alternated in the rehearsal. Therapist continues to be specific in instructions and models the steps in the first two presentations before moving to more general instructions in later presentations.

3. Discussion of rehearsal includes reinforcement of desired changes and focus on problematic issues.

D. Wrap-up.

1. Summary of acquired skills and processes. Discussion of personal gain and change.

2. Encouragement for continued practice and application of skills.

3. Development of personal maintenance goals, questions, and termination issues.

Appendix B

Session by Session Outline of Cognitive Restructuring

Session by Session Outline of Cognitive-Restructuring (CR)

The procedures in this outline have been taken from the research manual for the cognitive and relaxation anger reduction program of Deffenbacher, McNamara, Stark, and Sabadell (1990). The components that imply a relaxation technique have been removed.

I. Session 1.

A. Introduction of group members and discussion of their problems with anger and motivation for participation.

B. Cover issues of confidentiality.

C. Introduction to Cognitive-Restructuring (CR).

1. Describe anger in terms of thoughts and evaluations in the angering situation. Use earlier group examples of anger to illustrate.

2. Distinguish the emotional state of anger from aggressive behavior.

3. Discuss treatment rationale and overview of group goals.

a. Anger as emotional arousal and cognitions about the angering situation.

b. Gaining control of the cognitive arousal will decrease anger levels and allow the person to cope with the situation more constructively.

c. Learning ways to identify personal, emotional, and cognitive components of anger and changing them.

d. Importance of in-session and out-of-session (involving real events) practice.

D. Introduction of cognitive elements.

1. Use group examples to highlight the importance of cognitive aspects of anger arousal. Try to use different reactions to similar events within the person or between individuals to elicit a difference in perspective notion to emphasize the cognitive element.

2. Group exercise to enhance understanding of how cognitions influence emotional arousal. Therapist reiterates that life elicits a range of emotions but people can make things worse by the way think about those life situations, i.e., anger related emotions such as frustration, annoyance, mild anger, disappointment are appropriate but group members often escalate these to high anger by the way they think.

3. Introduction to anger-relevant cognitive distortions including catastrophizing, demanding or coercive thoughts, overgeneralization, inflammatory labeling, and misattributions. Give members handout summarizing these cognitive distortions (see Appendix M) and link to group examples.

E. Discussion of reactions and therapist answers questions regarding the material.

F. Homework.

1. Identification of personal examples of cognitive distortions to be discussed during the next session.

2. Identify and record two current situations identified as anger provoking.

3. Anger Log. Members self monitor angering situations as well as their emotional and physiological reactions to those events. Members record on the Anger Log all reactions > 40 on a 100 point scale (see Appendix G). Bring Anger Log to next session.

II. Session 2.

A. Discussion of homework.

1. Collect Anger Logs, relaxation recordings, and review participants' experiences. Emphasize the following:

a. Importance of personal awareness as basis for increased self control.

b. Use of homework examples to encourage participants to increase their awareness of personal, affective, and cognitive components of anger.

2. Assess development of anger situations and any questions or difficulties.

B. Review material from the previous session regarding cognitive distortions. Discuss the examples provided by the group and process how cognitive distortions may have influenced the anger experience.

C. Clarify and support cognitive awareness and changes and relate to handout from previous session.

D. Coping Skills Training.

1. Cognitive coping skills training emphasizes how cognitive elements ("attitude" or "how you look at things") contribute to anger arousal.

2. Therapist instructs participants to use the "helpful" self thoughts from the handout on Self Thoughts in Anger to examine situations. Therapist models the use of helpful self thoughts to more adaptively examine a set of circumstances (e.g., replacing demands with requests).

3. Introduction of active self control and emphasis again placed on practice.

E. Homework.

1. Continue identification of angering situations and cognitive distortions, but include the implementation of "helpful" self thoughts.

2. Continue self-monitoring anger reactions on Anger Log.

3. Identify and develop two examples of anger that reflect real life experiences of the group member.

III. Session 3.

A. Discuss homework activities.

B. Review of previous material.

C. Discussion of anger examples and applicability to material covered.

D. Coping Skills Training.

1. Therapist instructs group members to consider helpful self thoughts related to a situation and individuals continue to develop concrete cognitive counter-responses.

2. Therapist models appropriate cognitive coping and encourages group members to contribute to the discussion of other members.

E. Homework.

1. Continued review of techniques.

2. Continued self-monitoring on Anger Log and application of relaxation skills to stressful or angering situation.

3. Identify and develop two new examples for next session.

IV. Session 4.

A. Discuss homework activities and investigate the application of cognitive evaluation and cognitive coping to real-life circumstances.

B. Discussion of each members anger examples and relevance to material.

1. Each individual will discuss how they have identified the cognitive distortion and how cognitive coping skills can be useful in the situation.

C. Coping Skills Training.

1. Training in cognitive counter-responses similar to the last sessions, but with more general instructions, i.e., participants discuss application of cognitive skills as they apply to their situations and fashion sets of new self talk.

D. Homework.

1. Continued self-monitoring on Anger Log and application of skills to stressful or angering situation.

2. Identify and develop two unresolved angering events.

V. Session 5.

A. Discuss homework activities and investigate the application of skills to real-life circumstances.

B. Discussion of angering events and how they can be reinterpreted. Also discuss the use of coping skills.

C. Discussion of each members anger examples and relevance to material.

1. Each individual will discuss how they have identified the cognitive distortion and how cognitive coping skills can be useful in the situation.

D. Wrap-up.

1. Summary of acquired skills and processes. Discussion of personal gain and change.

2. Encouragement for continued practice and application of skills.

3. Development of personal maintenance goals, questions, and termination issues.

Appendix C

Oral Recruitment Script

Oral Recruitment Script

*Jail personnel will identify all male individuals who may participate in the study. Those who are unable to leave their cells due to suicidal, aggressive, or psychotic behavior will not attend the recruitment session.

"My name is Lori Diaz and I would like to take a few moments of your time to tell you about an opportunity you may have to participate in group therapy. I will be conducting groups comparing two commonly used techniques for reducing and controlling anger. These techniques to be compared are "systematic desensitization" and "cognitive-restructuring" and this study is for my dissertation project. Most individuals could improve the manner in which they handle anger in stressful situations, and prior arrests for anger-related problems are not required for participation. Anyone who is interested may participate and expect to learn techniques which may make it easier to resolve conflicts in their lives. Participation does not cost anything and will involve attending 5 one-hour sessions and filling out information forms. I will be back on (date) to start the 1st group session. More details of the study will be discussed, and you will be asked to fill out some forms. Remember, you can change your mind about participating at any time. If you think you may be interested, please place your name on the sign-up sheet."

*Prior to completion of the initial assessment forms or participation in the first session, the consent form will be read aloud to the volunteers and remaining questions will be answered.

Appendix D

Consent Form Approved 5/4/97

Western Michigan University
Department of Psychology
Consent to Participate in Research

Title: A Comparison of Cognitive-Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population.

Principal Investigator: Dr. Lester Wright
Student Investigator: Lori Diaz

I am being invited to take part in a research study. This study is intended to compare two methods of reducing anger often used in mental health clinics. This is required for Lori Diaz's graduate school program and I will not be asked to pay for participation.

If I agree to participate, I will attend five one hour sessions with other inmates. Before the first session and after the last session, I will fill out several forms. On these forms, I will score my general levels of anger and how I might act in given situations. These forms will take about 1/2 hour to complete. The first session will start at 9:00 am on Monday, June 1st and the I will meet with the group for one hour each week until June 29th. Six weeks after I finish, I will be asked to complete more forms. If I am still in jail, Lori Diaz will bring them here to fill out. If I am not in jail, they will be sent to my home address. If I complete and return these forms to Lori Diaz, I will be given or sent a five dollar money order. I will not be paid for any other part of the study.

I understand that my name will not appear on any forms that I fill out, except this consent form. The forms will be numbered and Lori Diaz will keep a list of the names of the participants and their numbers. Once the study is over, the list with my name will be destroyed. The other forms that I fill out will be kept for at least three years in a locked file in the principal investigator's lab. If I say or do anything that suggests that I may hurt myself or any other person during the sessions, Lori Diaz will report this to the appropriate authorities. I am also aware that the sessions will be audio-taped to be sure that Lori Diaz is conducting the sessions correctly. I will not be asked to say my full name while in session.

After I fill out the first set of forms, I will be placed in one of two groups. Each groups will have around 6-12 people. I am aware that I will not be given a reduction in sentence, special treatment in the criminal justice system, or any money for participation in this study. I will not be punished in any way if I refuse to take part or drop out of this study. I may not be able to participate if I have cell restrictions, assaultive/suicidal behavior, psychotic behavior, or an inability to speak or comprehend English.

If I take part in this study, I may become better able to control anger and solve problems in personal, social, and employment areas of my life. This research may also

benefit others by pointing out which components of treatment programs are most helpful in reducing anger.

I understand that I may become uncomfortable talking about my personal experiences with anger and listening to other people take about anger. If I need crisis counseling in this area, Lori Diaz is prepared to make a referral. It is possible that I may experience discomfort from tensing my muscles in one of the groups. If I feel discomfort that does not go away, Lori Diaz will refer me to a doctor. I will be responsible for any costs of therapy or medical treatment if I choose to pursue it. As in all research, there may be unforeseen risks to the participant. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or additional treatment will be made available to me except as otherwise stated in this consent form.

If I have I questions about this study, I may contact Lori Diaz at 387-8307 or Dr. Lester Wright at 387-8358. I may also contact the Chair of Human Subjects Institutional Review Board at 387-8293 or the Vice President for Research 387-8298 with any concerns that I may have. My signature below indicates that I understand the purpose and requirements of the study and that I agree to participate.

Signature _____ Date _____

Appendix E

Consent Form Approved 4/29/99

Western Michigan University
Department of Psychology
Consent to Participate in Research

Title: A Comparison of Cognitive-Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population.
Principal Investigator: Dr. Lester Wright
Student Investigator: Lori Diaz

I am being invited to take part in a research study. This study is intended to compare two methods of reducing anger often used in mental health clinics. This is required for Lori Diaz's graduate school program and I will not be asked to pay for participation.

If I agree to participate, I will attend five one hour sessions with other inmates. Today, before the first session, and after the last session, I will fill out several forms. On these forms, I will score my general levels of anger and how I might act in given situations. These forms will take about 1/2 hour to complete. The first session will start at 1:30 pm on Wednesday, _____ and the I will meet with the group for one hour each week until _____.

My name will not appear on any forms that I fill out, except this consent form. The forms will be numbered and Lori Diaz will keep a list of the names of the participants and their numbers. Once the study is over, the list with my name will be destroyed. The other forms that I fill out will be kept for at least three years in a locked file in the principal investigator's lab. If I say or do anything that suggests that I may hurt myself or any other person during the sessions, Lori Diaz will report this to the appropriate authorities. The sessions will be audio-taped to be sure that Lori Diaz is conducting the sessions correctly. I will not be asked to say my full name while in session.

After I fill out the first set of forms, I will be placed in one of two groups. One group will utilize relaxation techniques and the other will focus on identifying certain thoughts common in anger-provoking situations. Each group will have around 6-12 people and 30-40 total inmates will participate in the study. I will not be given a reduction in sentence, special treatment in the criminal justice system, or any money for participation in this study. I will not be punished in any way if I refuse to take part or drop out of this study. I may not be able to participate if I have cell restrictions, assaultive/suicidal behavior, psychotic behavior, or an inability to speak or comprehend English.

If I take part in this study, I may become better able to control anger and solve problems in personal, social, and employment areas of my life. This research may also

benefit others by pointing out which components of treatment programs are most helpful in reducing anger.

I may become uncomfortable talking about my personal experiences with anger and listening to other people take about anger. If I need crisis counseling in this area, Lori Diaz is prepared to make a referral. I may experience discomfort from tensing my muscles in one of the groups. If I feel discomfort that does not go away, Lori Diaz will refer me to a doctor. I will be responsible for any costs of therapy or medical treatment if I choose to pursue it. As in all research, there may be unforeseen risks to the participant. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or additionai treatment will be made available to me except as otherwise stated in this consent form.

If I have I questions about this study, I may contact Lori Diaz at (616) 410-2126 or Dr. Lester Wright at (616) 387-4472. I may also contact the Chair of Human Subjects Institutional Review Board at (616) 387-8293 or the Vice President for Research (616) 387-8298 with any concerns that I may have.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HISRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Subjects should not sign this document if the corner does not show a stamped date and signature.

My signature below indicates that I have read and/or had explained to me the purpose and requirements of the study and that I agree to participate.

Signature _____ Date _____

Consent obtained by: _____ Date _____

Appendix F

Anger Log

Anger Log

Please describe the most anger-provoking incident of each day and rate it according to its anger intensity.

(0 = no anger at all - - 100 = maximum anger ever experienced)

Date	Time	Anger Situation	Anger Intensity

Appendix G

Anger Symptom and Anger Situation Measures

Anger Symptom

Please describe the typical physiological symptoms you currently experience associated with anger (i.e. rapid heart rate, clenched fists, sweating, nausea, etc.). Rate these symptoms based upon typical severity of anger arousal.

(0 = no symptoms — 100 = extremely severe)

Symptom Score

Anger Situation

Please describe the most anger-provoking situation you are currently experiencing in your life. Rate this situation according to its anger intensity.

(0 = no anger at all — 100 = maximum anger ever experienced)

Anger Score

Appendix H

Satisfaction Questionnaire

Satisfaction Questionnaire

Please answer each of the questions below. Circle the number that best indicates your feelings regarding the group in which you have participated.

1. Overall, to what extent are you satisfied with the group in which you participated?

Not at all Satisfied		Moderately Satisfied		Very Satisfied
1	2	3	4	5

2. Do you think the group met your needs?

Not at all		Moderately		Very Much So
1	2	3	4	5

3. How useful do you think the techniques discussed in the group will be in facing anger problems in your life?

Not at all Useful		Moderately Useful		Very Useful
1	2	3	4	5

4. How many sessions did you complete?

Circle the total number of sessions you attended

1	2	3	4	5

5. How likely would you be to recommend a group like this to a friend or family member?

Not at all Likely		Moderately Likely		Very Likely
1	2	3	4	5

6. How likely are you to use these techniques in the future?

Not at all Likely		Moderately Likely		Very Likely
1	2	3	4	5

7. To what extent did the group leader seem to know the material?

Not at all		Moderately		Very Much
1	2	3	4	5

8. Overall, how helpful was the group leader in helping you learn the techniques?

Not at all helpful		Moderately Helpful		Very Helpful
1	2	3	4	5

Appendix I

Muscle Groups for Systematic Desensitization Group

This information was taken from the research manual for the cognitive and relaxation anger reduction program of Deffenbacher, McNamara, Stark, & Sabadell (1990).

Muscle Groups and Exercises:

1. Hands by clenching them
2. Wrists and forearms by extending them and bending hands at the wrist
3. Biceps and upper arms by bending your arms at the elbows and flexing the upper arms
4. Shoulders by shrugging them

(Review back over the arms and shoulders)

5. Forehead by wrinkling it deeply
6. Eyes and bridge of the nose by closing the eyes tightly (contact lens should be removed before beginning the exercise if you wear them)
7. Cheeks and jaws by grinning from ear to ear
8. Mouth and lips by pressing the lips together tightly
9. Back of the neck by pressing head backwards and downwards firmly
10. Front of the neck by touching the chin on the chest

(Review head and neck area)

11. Chest by taking a deep breath, holding it, and then exhaling
12. Back by arching the back up and away from the support surface
13 Stomach by pulling it in as far as possible
14. Stomach by forming it into a tight knot

(Review chest and trunk area)

15. Tighten the back of the legs as if you were lifting yourself from the chair.
16. Inner leg by pressing knees together.
17. Lower legs by trying to touch the toes to the knee caps
18. Lower legs by pointing the toes downward and away

(Review lower body area)

Appendix J

Home Practice for Relaxation

This information was taken from the research manual for the cognitive and relaxation anger reduction program of Deffenbacher, McNamara, Stark, & Sabadell (1990).

Home Practice on Relaxation

Practice of relaxation is a very important part of our process. It is a skill that only develops with practice. You are asked to practice it regularly, say five out of every seven days. Practice more if you can.

You should try to make the relaxation experience at home parallel closely your experience in the sessions. Choose a place that is quiet and where you can be undisturbed for approximately 30 minutes. Pick a place where your body will be as supported and tension-free as possible. Beds, couches, or cushions on the floor are good systems for people relaxing in a horizontal position. Recliners, large chairs, or two chairs, one to sit on and the other to support your legs, are good ways for people who are relaxing in a sitting position. If you find a good system, stay with it. If it is uncomfortable or you fall asleep, change your position and/or time of day for practice.

Follow the tension-release procedures you learned in the session. Tense each muscle group in the way and order that you learned them (see next page for a list of muscles and ways of tensing them). Tense each muscle group for 5-10 seconds. Then let the muscle group go quickly and spend 20-30 seconds focusing upon letting the tension go and attending to the contrast between tension and relaxation. If an area is still tense, then repeat the tension-release exercise. Otherwise move on to the next muscle group. At various points (these are noted on the next page) you should go back over and review the muscle groups just completed. Focus on the area and just let a wave of relaxation flow through the area and relax it a bit more. When you are finished, arouse yourself gently by counting backwards from 5 to 1. On the count of 4 move your arms and legs easily. On the count of 2 open your eyes and look around. On the count of 1 you should be alert and fresh.

If you are practicing more than once per day, it is generally best not to practice twice within the same three-hour period. If you are practicing in the late afternoon or evening, you may experience a "second wind" within a few minutes to and hour or so after you practice. If this happens, you may want to make it work for you. However, make sure that you do not get the "second wind" just at a time when you want to drift off to sleep.

On the next page you will find a list of the muscle groups in order and the methods for tensing them. Tense each hard, but no to the point of pain or cramping. You will probably find that you have a few areas in which you experience most of your tension. These are the ones that you may want to repeat the tensing and releasing before going on to the next group

Good luck on your practice!

Appendix K

Relaxation Recording Sheet

This information was taken from the research manual for the cognitive and relaxation anger reduction program of Deffenbacher, McNamara, Stark, & Sabadell (1990).

Relaxation Recording Sheet

Date/Time	How practice was experienced (areas of tension, problems in relaxing, distractions, areas of Easy relaxation, good feelings, etc.)	Tension Level (0-100) Before	After

Appendix L

Coding Sheets for Treatments

CODING SHEETS FOR TREATMENTS

Instructions:

Please listen to the tapes and pay very close attention. Use the coding sheet which corresponds to the session number and treatment type. Each treatment session should follow the outline stated on the coding sheet. As you listen to the tapes, please rate the section (as stated on each row of the coding sheet) utilizing the following scale:

0 = section was not covered
1 = section was somewhat covered
2 = section was almost completed covered
3 = section was completely covered

Each row should contain a check mark indicating the rating. For example, if the row read, A. Introduction of group members, you would determine if this was completed in the session. If you listen to the tapes and can identify where the therapist has processed introductions in the group, you would place a check in the "3" column. Furthermore, if the next row read, B. Discuss personal thoughts regarding treatment, you would determine whether this was completely covered. If you cannot identify that it was completely covered, but think that it was covered to some degree, you may rate it a "2."

0	1	2	3	SESSION ONE OUTLINE: EXAMPLE
			X	A. Introduction of group members.
		X		B. Discuss personal thoughts regarding treatment.

Please pay very close attention to the tapes when rating the sections. You may need to rewind the tape to review a section. This is fine, however, if the content of the section remains unclear, the rating should reflect the ambiguity. You should not need to review a section more than a second time. Other research assistants may be rating these sessions as well. Please do not communicate with each other regarding your ratings.

0	1	2	3	SESSION ONE OUTLINE: SYSTEMATIC DESENSITIZATION
				A. Cover issues of confidentiality.
				B. Introduction of group members and discussion of their problems with anger and motivation for participation.
				C. Introduction to Systematic Desensitization (SD). 1. Describe anger in terms of physiological and emotional arousal. Use earlier group examples of anger to illustrate.
				2. Distinguish the emotional state of anger from aggressive behavior.
				3. Discuss treatment rationale and overview of group goals. a. Anger as emotional/physiological arousal.
				b. Gaining control of the emotional arousal will decrease anger levels and allow the person to cope with the situation more constructively.
				c. Learning ways to identify personal, physiological, and emotional components of anger and changing them.
				d. Importance of in-session and out-of-session (involving real events) practice.
				D. Orientation to relaxation. 1. Use discussion of participants' anger experiences to highlight the existence of physiological and emotional arousal.
				2. Link relaxation to reductions in emotional and physiological arousal.
				3. Description of progressive relaxation exercises and demonstration of tension/release of muscle groups (see Appendix J).
				4. Questions and discussion regarding gum chewing, contact lenses, glasses, physical problems, and other issues.
				E. Therapist guided progressive relaxation with tension-release of each muscle group once.
				F. Discussion of reactions and therapist answers questions regarding the progressive relaxation.
				G. Homework. 1. Relaxation practice. Out-of-session practice described as means with which to acquire the ability to decrease physiological and emotional aspects of anger arousal. Practice progressive relaxation at least once daily for 5 to 7 days and record reactions. Bring relaxation recording to the next session (see Appendix L).
				2. Identify past relaxing experience for use as an imaginal relaxation scene. Identify and record two scenes which involve anticipating, waiting for, or thinking about an upcoming angering event—including external and internal (emotional, physiological, and behavioral urge information) details of the situations. Scenes should be approximately 50 on a 100 point anger scale.

0	1	2	3	SESSION TWO: SYSTEMATIC DESENSITIZATION
				A. Discussion of homework. 1. Collect Anger Logs, relaxation recordings, and review participants' experiences. Emphasize the following:
				a. Importance of personal awareness as basis for increased self control.
				b. Use of homework examples to encourage participants to increase their awareness of personal, affective, and physiological components of anger.
				2. Assess development of skills and problems with relaxation, (e.g. lack of relaxation practice, difficulty relaxing certain areas, falling asleep, etc.).
				B. Description of signaling procedure, (i.e., raising one finger or hand so that it is visible to the therapist).
				C. Relaxation image construction. 1. Therapist modeling of relaxation image construction. Include the concrete situational aspects of the scene as well as the various sensory and emotional components of the experience.
				2. Make sure each member has constructed an image that reflects a specific moment in time in which he felt relaxed. Avoid the use of fantasy (i.e. situations never encountered), composite (i.e., situations composed of several events), and sexual scenes as they pose problems for visualization.
				D. Relaxation training. 1. Therapist-guided progressive relaxation with tension-release of each muscle group repeated once.
				2. When all or most participants signal relaxation, the therapist presents the preparing-for-anger events in imagination, having individuals experience anger arousal at about the 50-60 level (on a 100 point intensity scale) for 30-40 seconds. The therapist then cues the client to engage in visualization of relaxation scene and tension and release of tense muscles.
				3. Repeat process 4-6 times, alternating use of the two anger scenes. Alternating is done by labeling scenes as scene 1 and scene 2 and then instructing clients to visualize scene 1 on one trial and scene 2 on another. In the first two trials, the therapist specifically directs clients through identification of tense muscle groups. In later repetitions, the therapist begins to fade instructions and allow the subjects to identify remaining tension
				E. Homework. 1. Continue relaxation exercises and imagery. 2. Continue self-monitoring anger reactions and focus on physiological and emotional aspects. 3. Identify and develop two moderate anger scenes (60-70 on a 100 point scale) that reflect real life experiences of the group member.

0	1	2	3	SESSION THREE: SYSTEMATIC DESENSITIZATION
				A. Discuss homework activities.
				B. Discussion of moderate anger scenes. 1. The scenes will be discussed as occurring on a 60-70 level (on a 100 point scale). As in previous session, scenes are labeled as Scenes 1 and 2 for alteration during relaxation training.
				C. Relaxation Training. 1. Therapist-guided relaxation followed by a hand signal once relaxation is achieved. Therapist then cues the moderately angering scenes and, once most people have achieved anger visualization (hand signal), encourage members to continue to experience the anger for the next 30-40 seconds. Therapist then instructs the individual to turn off the anger scene and cues relaxation by visualization and muscle relaxation.
				2. As before, scenes 1 and 2 are alternated in the rehearsal. Therapist continues to be specific in instructions and models the steps in the first two presentations before moving to more general instructions in later presentations.
				3. Discussion of rehearsal includes reinforcement of desired changes and focus on problematic issues.
				D. Homework. 1. Continued relaxation and relaxation log recording. 2. Continued self-monitoring on Anger Log and application of relaxation skills to stressful or angering situation. 3. Identify and develop two angering events (60-80 level on a 100 point scale) in which the person has not resolved the problem and/or the anger remains after the event is over).
0	**1**	**2**	**3**	**SESSION FOUR: SYSTEMATIC DESENSITIZATION**
				A. Discuss homework activities and investigate the application of relaxation skills to real-life circumstances.
				B. Discussion of unresolved anger scenes. 1. The scenes will be discussed as occurring on a 60-70 level (on a 100 point scale). As in previous sessions, scenes are labeled as Scenes 1 and 2 for alteration during relaxation training.
				C. Relaxation Training. 1. Therapist-guided relaxation followed by a hand signal once relaxation is achieved. Therapist then cues the unresolved angering scenes and, once most people have achieved anger visualization (hand signal), encourage members to continue to experience the anger for the next 30-40 seconds. Therapist then instructs the individual to turn off the anger scene and cues relaxation by visualization and muscle relaxation.

				2. As before, scenes 1 and 2 are alternated in the rehearsal. Therapist continues to be specific in instructions and models the steps in the first two presentations before moving to more general instructions in later presentations.
				3. Discussion of rehearsal includes reinforcement of desired changes and focus on problematic issues.
				D. Homework. 1. Continued relaxation and relaxation log recording. 2. Continued self-monitoring on Anger Log and application of relaxation skills to stressful or angering situation. 3. Identify and develop two highly angering events (75-100 level on a 100 point scale).
0	**1**	**2**	**3**	**SESSION FIVE: SYSTEMATIC DESENSITIZATION**
				A. Discuss homework activities and investigate the application of relaxation skills to real-life circumstances.
				B. Discussion of highly angering events. 1. The scenes will be discussed as occurring on a 75-100 level (on a 100 point scale). As in previous session, scenes are labeled as Scenes 1 and 2 for alteration during relaxation training.
				C. Relaxation Training. 1. Therapist-guided relaxation followed by a hand signal once relaxation is achieved. Therapist then cues the unresolved angering scenes and, once most people have achieved anger visualization (hand signal), encourage members to continue to experience the anger for the next 30-40 seconds. Therapist then instructs the individual to turn off the anger scene and cues relaxation by visualization and muscle relaxation.
				2. As before, scenes 1 and 2 are alternated in the rehearsal. Therapist continues to be specific in instructions and models the steps in the first two presentations before moving to more general instructions in later presentations.
				3. Discussion of rehearsal includes reinforcement of desired
				D. Wrap-up. 1. Summary of acquired skills and processes. Discussion of personal gain and change.
				2. Encouragement for continued practice and application of skills.
				3. Development of personal maintenance goals, questions, and termination issues.

0	1	2	3	SESSION ONE OUTLINE: COGNITIVE RESTRUCTURING
				A. Cover issues of confidentiality.
				B. Introduction of group members and discussion of their problems with anger and motivation for participation.
				C. Introduction to Cognitive-Restructuring (CR). 1. Describe anger in terms of thoughts and evaluations in the angering situation. Use earlier group examples of anger to illustrate.
				2. Distinguish emotional anger from aggressive behavior.
				3. Discuss treatment rationale and overview of group goals. a. Anger as emotional arousal and cognitions about the angering situation.
				b. Gaining control of the cognitive arousal will decrease anger levels and allow the person to cope with the situation more constructively.
				c. Learning ways to identify personal, emotional, and cognitive components of anger and changing them.
				d. Importance of in-session and out-of-session (involving real events) practice.
				D. Introduction of cognitive elements. 1. Use group examples to highlight the importance of cognitive aspects of anger arousal. Try to use different reactions to similar events within the person or between individuals to elicit a difference in perspective notion to emphasize the cognitive element.
				2. Exercise to enhance understanding of how cognitions influence emotional arousal. Therapist reiterates that life elicits a range of emotions but people can make things worse by the way we think about life situations, i.e., anger related emotions such as frustration, annoyance, mild anger, disappointment are appropriate but group members often escalate these to high anger by the way they think.
				3. Introduction to anger-relevant cognitive distortions including catastrophizing, demanding or coercive thoughts, overgeneralization, inflammatory labeling, and misattributions. Give members handout summarizing these cognitive distortions (see Appendix M) and link to group examples.
				E. Discuss reactions & Therapist answers questions regarding material.
				F. Homework. 1. Identification of personal examples of cognitive distortions to be discussed during the next session
				2. Identify & record two anger provoking, current situations.
				3. Anger Log. Members self-monitor angering situation as well as their emotional and physiological reactions to those events. Members record on the Anger Log all reactions >40 on a 100 point scale (see Appendix G). Bring Anger Log to next session.

0	1	2	3	SESSION TWO: COGNITIVE RESTRUCTURING
				A. Discussion of homework. 1. Collect Anger Logs, relaxation recordings, and review participants' experiences. Emphasize the following:
				a. Importance of personal awareness as basis for increased self-control.
				b. Use of homework examples to encourage participants to increase their awareness of personal, affective, and cognitive components of anger.
				2. Assess development of anger situations and any questions or difficulties.
				B. Review materials from the previous session regarding cognitive distortions. Discuss the examples provided by the group and process how cognitive distortions may have influenced the anger experience.
				C. Clarify and support cognitive awareness and changes and relate to handout from previous session.
				D. Coping Skills Training. 1. Cognitive coping skills training emphasizes how cognitive elements ("attitude" or "how you look at things") contribute to anger arousal.
				2. Therapist instructs participants to use the "helpful" self thoughts from the handout on Self Thoughts in Anger to examine situations.
				a. Therapist models the use of helpful self thoughts to more adaptively examine a set of circumstances (e.g., replacing demands with requests).
				3. Introduction of active self-control and emphasis again placed on practice.
				E. Homework. 1. Continue identification of angering situations and cognitive distortions, but include the implementation of "helpful" self thoughts. 2. Continue self-monitoring anger reactions on Anger Log. 3. Identify and develop two examples of anger that reflect real life experiences of the group members.

0	1	2	3	SESSION THREE: COGNITIVE RESTRUCTURING
				A. Discuss homework activities.
				B. Review of previous material.
				C. Discussion of anger examples and applicability to material covered.
				D. Coping Skills Training. 1. Therapist instructs group members to consider helpful self thoughts related to a situation and individuals continue to develop concrete cognitive counterresponses.
				2. Therapist models appropriate cognitive coping and encourages group members to contribute to the discussion of other members.
				E. Homework. 1. Continued review of techniques. 2. Continued self-monitoring on Anger Log and application of relaxation skills to stressful or angering situation. 3. Identify and develop two examples for next session.
0	**1**	**2**	**3**	**SESSION FOUR: COGNITIVE RESTRUCTURING**
				A. Discuss homework activities.
				B. Investigate the application of cognitive evaluation and cognitive coping to real-life circumstances.
				C. Discussion of each member's anger examples and relevance to material. 1. Each individual will discuss how they have identified the cognitive distortion and how cognitive coping skills can be useful in the situation.
				D. Coping Skills Training. 1. Training in cognitive counterresponses similar to the last sessions, but with more general instructions.
				2. Participants discuss application of cognitive skills as they apply to their situations and fashion sets of new self talk.
				E. Homework. 1. Continued self-monitoring on Anger Log and application of skills to stressful or angering situation. 2. Identify and develop two unresolved angering events.

0	1	2	3	SESSION FIVE: COGNITIVE-RESTRUCTURING
				A. Discuss homework activities and investigate the application of skills to real-life circumstances.
				B. Discussion of angering events and how they can be reinterpreted.
				C. Discussion of the use of coping skills.
				D. Discussion of each member's anger examples and relevance to material.
				1. Each individual will discuss how they have identified the cognitive distortion and how cognitive coping skills can be useful in the situation.
				E. Wrap-up. 1. Summary of acquired skills and processes. Discussion of personal gain and change.
				2. Encouragement for continued practice and application of skills.
				3. Development of personal maintenance goals, questions, and termination issues.

Appendix M

Approval Letter From Barry County Sheriff

March 20, 1998

Richard Wright, Ph.D.
Chair, Human Subjects Institutional Review Board
Office of Research and Sponsored Programs
Kalamazoo, MI 49008-3899

Dear Dr. Wright,

This letter is to inform you that Lori Diaz has requested to conduct her dissertation study entitled "A Comparison of Cognitive-Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population" in the Barry County Jail. She has met with myself and described the general details and requirements of the study. Lori was informed that she may conduct research groups within the jail pending approval from the Western Michigan University HSIRB.

Sincerely,

Stephen DeBoer, Barry County Sheriff

Appendix N

Human Subjects Institutional Review Board Approval Letters

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: 4 May 1998

To: Lester Wright, Principal Investigator
Lori Diaz, Student Investigator

From: Richard Wright, Chair Richard A. Wright

Re: HSIRB Project Number 98-03-23

This letter will serve as confirmation that your research project entitled "A Comparison of Cognitive - Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population" has been **approved** under the **full** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 4 May 1999

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: 21 May 1998

To: Lester Wright, Principal Investigator
Lori Diaz, Student Investigator

From: Richard Wright, Chair Richard A. Wright

Re: HSIRB Project Number 98-03-23

This letter will serve as confirmation that the changes to your research project "A Comparison of Cognitive - Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population" requested in your FAX received 12 May 1998 have been approved by the Human Subjects Institutional Review Board. (Processing of your request was delayed because the HSIRB Project Number was not included in the FAX.)

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 4 May 1999

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: 15 October 1998

To: Lester Wright, Principal Investigator
Lori Diaz, Student Investigator for dissertation

CC: Malcolm Robertson

From: Sylvia Culp, Chair Sylvia Culp

Re: Changes to HSIRB Project Number 98-03-23

This letter will serve as confirmation that the changes to your research project "A Comparison of Cognitive - Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population" requested in your memo dated 13 October 1998 have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 4 May 1999

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: 10 September 1998

To: Lester Wright, Principal Investigator
Lori Diaz, Student Investigator for dissertation

CC: Malcolm Robertson

From: Sylvia Culp, Chair

Re: Changes to HSIRB Project Number 98-03-23

This letter will serve as confirmation that the changes to your research project "A Comparison of Cognitive - Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population" requested in your FAX received 4 September 1998 have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 4 May 1999

Appendix O

Human Subjects Institutional Review Board Approval of Extension

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: 29 April 1999

To: Lester Wright, Principal Investigator
Lori Diaz, Student Investigator for dissertation

From: Sylvia Culp, Chair Sylvia Culp

Re: Extension of Approval, HSIRB Project Number 98-03-23

This letter will serve as confirmation that an extension to your research project entitled "A Comparison of Cognitive - Restructuring and Systematic Desensitization Techniques for Anger Reduction with an Inmate Population" has been granted by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now continue to implement the research as described in the original application.

You must use copies of the consent document bearing the HSIRB approval stamp when enrolling subjects as per the Research Subject Consent/Assent Document Approval Stamp Policy, effective 1 April 1997 (on the web site at <http://www.wmich.edu/research/compliance/hsirb/hsirb-4e.html>). Based on the documentation you provided with your renewal request, you have not been following this procedure. Please contact the research compliance coordinator at 387-8293 if you have any questions.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the continued pursuit of your research goals.

Approval Termination: 29 April 2000

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