

# **An Open Trial of a Comprehensive Anger Treatment Program on an Outpatient Sample**

J. Ryan Fuller

*New York Behavioral Health and Albert Ellis Institute, USA*

Raymond DiGiuseppe

*Albert Ellis Institute and St John's University, New York, USA*

Siobhan O'Leary and Tina Fountain

*Albert Ellis Institute, New York, USA*

Colleen Lang

*New York Behavioral Health, USA*

**Background:** This pilot study was designed to investigate the efficacy of a cognitive behavioral treatment for anger. **Method:** Twelve (5 men and 7 women) outpatient adults completed 2-hour group sessions for 16 sessions. Participants were diagnosed with 29 Axis I and 34 Axis II disorders with high rates of comorbidity. Empirically supported techniques of skills training, cognitive restructuring, and relaxation were utilized. In this protocol, cognitive restructuring emphasized the use of the ABC model to understand anger episodes and the Rational Emotive Behavior Therapy (REBT) techniques of disputing irrational beliefs and rehearsing rational coping statements, but additional cognitive techniques were used, e.g. self-instructional training (SIT). Skills training included problem-solving and assertiveness. Relaxation training was paced respiration. Motivational interviewing, imaginal exposure with coping, and relapse prevention were also included. **Results:** Significant improvements were found from pre- to post-treatment on the following measures: the Trait Anger Scale of the State-Trait Anger Expression Inventory-II; and Anger Disorder Scale total scores; idiosyncratic anger measurements of situational intensity and symptom severity; and the Beck Depression Inventory-II; **Conclusions:** In order to extend the significant research findings of this pilot study, future investigations should involve larger sample sizes, populations drawn from various settings, and contact control groups.

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Reprint requests to J. Ryan Fuller, New York Behavioral Health, 909 Third Avenue, New York, NY 10022, USA.  
E-mail: fuller@NYBhealth.com

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## Introduction

Frequent, intense, and enduring anger, including dysfunctional affective expression and suppression, is associated with significant and comprehensive social, socioemotional, vocational and physical health impairment (e.g. Tafrate, Kassonov and Dundin, 2002), the extent of which classifies difficulties in anger management as a serious public health problem.

Few well-controlled studies have been conducted evaluating cognitive behavioral treatment interventions of anger. Those with the strongest empirical support include cognitive interventions (Deffenbacher, Dahlen, Lynch, Morris and Gowensmith, 2000), skills training (Deffenbacher, 1998), relaxation (Deffenbacher, Huff, Lynch, Oetting and Salvatore, 2000), and formats representing different combinations of these (Deffenbacher, Filetti, Lynch, Dahlen and Oetting, 2002). These interventions have proven effective across a variety of clinically angry populations (e.g. Chemtob, Novaco, Hamada, Gross and Smith, 1997). However, there is no scientific evidence indicating that clinicians outside of university or hospital settings utilize empirically tested anger treatments. Generalization of cognitive-behavioral treatment effectiveness to traditional populations, such as psychiatric outpatients, is warranted (Tafrate et al., 2002).

To our knowledge, only one descriptive analysis has been conducted on anger-disordered adult outpatients (Groditzky and Tafrate, 2000). This study utilized exposure exclusively as an intervention with a small group of court-mandated clients. Unfortunately, few studies have evaluated the efficacy of psychotherapy on treatment-seeking individuals from the community (Del Vecchio and O'Leary, 2004). Given the high number of anger-disordered clients presenting for treatment in private clinical settings (Lachmund, DiGiuseppe and Fuller, 2005), it is important to determine if cognitive behavioral psychotherapy is feasible and effective for adults seeking fee-for-service treatment.

Comprehensive diagnostic information on adults seeking outpatient treatment for anger is a prerequisite in making a determination about treatment effectiveness. Unfortunately, frequent diagnostic confusion complicates outpatient treatment of anger (Lachmund et al., 2005). The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Text Revised* (DSM-IV-TR; American Psychiatric Association, 2000) does not include an exclusive anger diagnosis, but a variety of disorders include anger as a diagnostic symptom, including Post-Traumatic Stress Disorder, Oppositional Defiant Disorder, Paranoid and Borderline Personality Disorders. Furthermore, related constructs of aggression, hostility, irritability, and resentment permeate the nosology (e.g. Generalized Anxiety Disorder, Antisocial Personality Disorder, Passive Aggressive Personality Disorder) while "anger attacks", but not anger per se, is included as a diagnostic specifier in Panic Disorder, Major Depressive Disorder, and Intermittent Explosive Disorder. Inaccurate diagnosis complicates case conceptualization, treatment planning and prognoses and, importantly for patients seeking help for anger, raises practical financial issues; lacking an Axis I diagnosis may prevent third party reimbursement.

## Method

This pilot study tested the efficacy of an extended CBT protocol, largely based on the work of Deffenbacher and McKay (2000), DiGiuseppe and Tafrate (2002), Kassinove and Tafrate (2004) and clinical experience.

### *Participants*

A sample of 12 participants (5 men and 7 women), presenting for outpatient treatment of anger problems, was intended to represent the typical angry patients treated by mental health practitioners in outpatient facilities. Their inclusion was contingent upon anger being the primary cause of distress and functional impairment.

All patients received structured clinical interviews as an initial step in describing the diagnostic characteristics of these patients. Diagnostic information revealed the sample to be a close approximation of how Tafrate et al. (2002) describe a traditionally defined clinical sample. They were diagnosed with 29 Axis I and 34 Axis II disorders with high rates of comorbidity.

### *Treatment*

Treatment consisted of 16 2-hour sessions of a group-based cognitive-behavioral anger management program, the goal of which was the development of adaptive coping skills. As suggested by Deffenbacher (2000), session length and the number of sessions were increased in order to maximize the treatment dose in the hope of improving treatment efficacy and viability (attrition and satisfaction). The treatment included didactic and Socratic methods of instruction and completion of exercises during and outside of sessions to increase skill acquisition, until participants indicated readiness for exposure exercises. Specifically, cognitive restructuring emphasized the use of the theoretical model to understand anger episodes and the Rational Emotive Behavior Therapy (REBT) techniques of disputing irrational beliefs, rehearsing rational beliefs and Self-Instructional Training (SIT). Behavioral skills training included problem-solving, consequential thinking and assertiveness. Relaxation training included paced respiration. Motivational interviewing techniques were employed throughout. A key component of the intervention, imaginal exposure required participants to imagine events that typically trigger anger and use reviewed coping strategies to modulate anger. Relapse prevention was a final focus of treatment.

### *Measures*

All participants received the Structured Clinical Interview for DSM-IV Diagnosis (SCID-1; First, Spitzer, Gibbon and Williams, 2002) and the Structured Clinical Interview-II for DSM-IV Diagnosis (SCID-II; First, Gibbon, Spitzer, Williams and Benjamin, 1997) to diagnose Axis I and II disorders, respectively. Four measures of anger were used to determine treatment efficacy from pre- to post-treatment: the Trait Anger Scale (TAS) of the State-Trait Anger Expression Inventory-II (STAXI-II; Spielberger, 1999) for overall level of anger, the Anger Disorders Scale (ADS; DiGiuseppe and Tafrate, 2004) was also used as an outcome measure, and the Anger

Situation Form (Deffenbacher and McKay, 2000) and Anger Symptom Form (Deffenbacher and McKay, 2000) for ideographic components of anger. Other outcome measures included the Beck Depression Inventory-II (BDI-II; Beck, Steer and Brown, 1996) for depressive symptoms, and the Outcome Questionnaire (OQ; Lambert et al., 1996) for current symptom distress, interpersonal relations, and social role congruence. Finally, the Working Alliance Inventory (WAI; Horvath and Greenberg, 1989) assessed therapeutic alliance.

## Results

*T*-tests were conducted on outcome measures to evaluate effects of treatment. Given the directional nature of all hypotheses, one-tailed tests were used. A Bonferroni correction was used with an adjusted alpha of .0091. At this level, five significant differences were found. Cohen's *d* was used to represent effect sizes, which were calculated by dividing pre-treatment/post-treatment differences by pooled standard deviations. We determined whether the improvement reached clinically significant change based on Jacobson and Truax's (1991) methods. For the *A* calculation method, a clinically meaningful difference was determined with a two-standard deviation change from pre-treatment, and the reliable change index (RCI), a gauge of change compared to the standard error (SE).

*T*-tests indicated significant changes in Trait Anger Scale T-scores from pre- ( $M = 67.67$ ,  $SD = 10.58$ ) to post-treatment ( $M = 57.17$ ,  $SD = 8.24$ ),  $t(11) = 3.22$ ,  $p < .01$  ( $d = 1.12$ ). ADS total score also changed significantly ( $M = 76.08$ ,  $SD = 14.02$ , pre vs.  $M = 60.33$ ,  $SD = 7.37$ , post),  $t(11) = 4.02$ ,  $p < .01$  ( $d = 1.47$ ). Depressive symptoms, as represented by the BDI-II score, decreased from pre- ( $M = 25.33$ ,  $SD = 12.34$ ) to post-treatment ( $M = 9.45$ ,  $SD = 8.20$ ),  $t(11) = 4.80$ ,  $p < .01$  ( $d = 1.55$ ). Effect sizes for all three of these nomothetic scales were large. Clinical significance classified patients into four categories: deteriorated, unchanged, improved, and recovered. The majority of patients received classifications of improved or recovered on the TAS (frequency of 10 out of 12 participants), BDI (11 out of 12), and ADS scores (11 out of 12), with the vast majority of those categorized as improved.

Anger Situation-Intensity (pre-  $M = 85.42$ ,  $SD = 13.89$  vs. post-test  $M = 37.50$ ,  $SD = 27.09$ ),  $t(11) = 5.20$ ,  $p < .01$  ( $d = 2.39$ ) and Anger Symptom-Severity ( $M = 69.17$ ,  $SD = 27.87$  vs.  $M = 30.58$ ,  $SD = 27.64$ ),  $t(11) = 4.16$ ,  $p < .01$  ( $d = 1.39$ ) scores were both significantly reduced. However, the other subscale scores of these idiosyncratic forms did not reach statistical significance.

## Discussion

As hypothesized, while the frequency of anger provocations remained constant, the frequencies of physiological anger symptoms decreased. Significant improvements were found from pre- to post-treatment on both measures of anger and depression. In addition, the effect sizes for these two measures were large and closely approximated those in previous studies (DiGiuseppe and Tafrate, 2003). Most important were the clinically meaningful changes. Again, 10 and 11 (respectively) of the 12 patients were either in the improved or fully recovered range on these general measures of anger.

Addressing problematic avoidance of anger triggers is considered to be an imperative component of the described intervention. Once the participants developed coping strategies, they were encouraged to refrain from avoidance and escape behaviors. The data indicated

that participants were able to confront anger provoking situations while still experiencing significant decreases in the emotional intensity and physiological arousal previously associated with these triggers. The alleviation of the avoidance-rumination cycle may be responsible for relapse prevention. Additionally, motivational enhancement and REBT skills are important contributors to indicated positive outcome. Cognitive restructuring based upon REBT is learned quickly and can be easily utilized in a variety of settings without ongoing professional contact, making these skills suitable for time-limited psychotherapy.

Importantly, participants reported high satisfaction with the treatment. Extending the number and length of sessions allowed ample time to process problems presented during homework review, address resistance, and enable group members to assist one another. It allowed for more clinician-patient contact, and possibly more importantly, for more interpersonal exchanges among group members (Yalom, 1985).

#### *Limitations and directions for future research*

The following improvements for strengthening the findings of this pilot study are suggested for future research: larger sample size, inclusion of a treatment control group, independent coding of fidelity, utilization of objective physiological/behavioral measures, and administration of treatment by different therapists. The relative contributions of each of the active ingredients of the treatment protocol (i.e. REBT skills, relaxation) would warrant delineation through a design that allows for variations in participants groups. Despite these important limitations, this study provided preliminary diagnostic information about a poorly understood population, and indicated promise for the use of a cost-effective, time-limited and most importantly, empirically based intervention approach. Given the pernicious effects of anger sequelae, continued development of innovative treatment approaches, longitudinal studies, and multi-site randomized-controlled trials (RCTs) are warranted to address this serious public health problem.

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