Journal of Social and Clinical Psychology, Vol. 23, No. 4, 2004, pp. 512-531

ANGER MANAGEMENT: DIAGNOSTIC DIFFERENCES AND TREATMENT IMPLICATIONS

HEATHER C. LENCH
University of California, Irvine

Courts are referring an increasing number of people to anger management treatment, yet there are very few available guidelines for how to diagnose and treat angry people. Indeed, anger does not exist as a diagnostic category in the DSM-IV. The purpose of the present study was (a) to determine whether people referred for anger treatment met the DSM-IV criterion for other affective disorders that symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning, and (b) to determine whether there were significant differences in the coping and anger expression styles utilized by angry versus normal populations. A group of 114 college students and 66 people referred for anger management treatment completed the Life Experiences Questionnaire, the Strategic Approaches to Coping, the Trait Anger Inventory, and the Revised-Anger Expression Inventory. Results indicate that people in the anger management group and people who scored high on the anger inventory demonstrate impairment in their relationships. There were also differences in the coping styles and anger expression styles used by angry individuals compared to those who were low in anger. These findings have practical implications for the diagnosis and treatment of anger-related disorders.

Diagnosing and treating individuals with anger problems has been an increasing concern to health organizations, clinicians, and society as a whole. For domestic violence and child abuse cases, courts have begun to refer individuals to "anger management treatment." A huge demand to treat angry people is placed on therapists by the courts, yet therapists do not yet have research-based guidelines for recognizing, diagnosing, treating, or preventing future violence. Because anger is the most common precipitator of violence, it is surprising that such a narrow body of

Financial support for this paper was provided to the author by the National Institute of Mental Health, National Research Service Award institutional grant, 5T32 MH19958-04.

Address correspondence to Heather Lench, Department of Psychology and Social Behavior, 3340 Social Ecology II, Irvine, CA 92697-7085; E-mail: hpenteco@uci.edu.

research on anger exists (Edmondson & Conger, 1996). Furthermore, despite the increased public awareness of anger as a problem, no distinct diagnostic categories for anger exist, nor is there adequate research on which therapeutic techniques are effective to treat angry patients (Beck & Fernandez, 1998; Browne, 1993; Terjesen, DiGiuseppe, & Naidich, 1997).

The purpose of the present study was to investigate whether a diagnostic category for anger is warranted and to identify differences between people with potentially damaging anger problems and people without these problems. Two specific goals were pursued. First, the relations between people's score on an anger inventory or referral for anger management treatment and problems in social, occupational, and romantic relationships were examined. One criterion for affective disorders (e.g., depression and anxiety) in the *Diagnostic and Statistical Manual of Mental Disorders-IV* (DSM-IV; American Psychiatric Association [APA], 1994) is that the symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. Therefore, if angry people report impairment in these areas, anger meets this criterion for a mood-related disorder. Second, associations between referral to anger management treatment or people's scores on an anger inventory and coping and anger expression styles were investigated. Knowledge regarding differences between clinically angry people referred for therapy and others in coping and anger expression may be useful for treatment and early intervention.

DEFINITIONS OF ANGER

Some theorists believe that anger is a maladaptive attempt at coping with a stressful environment, resulting in greater conflict and personal discomfort (Cox, Stabb, & Bruckner, 1999; Novaco, 1975). However, recent conceptualizations have focused on anger as an adaptive mechanism for dealing with obstructed goals and perceived threats (Cox et al., 1999; Stein & Levine, 1989), with healthy anger being differentiated from unhealthy anger in terms of how successfully the emotion serves the basic needs of the person (Grieger, 1986). For example, if a person made a quirky remark in an angry response to a coworker's rude comment, positively resolving the situation, then the anger response was healthy. If the person punched the rude coworker, thus endangering employment, the anger response was unhealthy.

Whereas some forms of dysfunctional anger are situation dependent and acute, such as the example described above, other forms may be related to chronic anger. People who are chronically or problematically angry are often unable to appropriately deal with stress and therefore

become frustrated, which inevitably leads to increased anger (Cox et al., 1999; Edmondson & Conger, 1996; Grieger, 1986). They may become angry in situations where it is not a useful emotion and may have difficulty successfully resolving the anger. Therefore, chronically angry people may become angry quicker and remain angry for longer periods of time. Hostility and anger are significant predictors of coronary heart disease and poor health (Fava, Anderson, & Rosenbaum, 1990). Furthermore, recent research indicates that people with chronic aggressive tendencies maintain poor social relationships (Monnier, Stone, Hobfoll, & Johnson, 1998). Because chronic anger affects daily life and health, it is likely not serving the basic needs of the person and is therefore dysfunctional.

In sum, it appears that acute or chronic dysfunctional anger can be harmful to people, causing impairment in their satisfaction, health, and relationships. However, research is needed to confirm earlier findings that anger harms social relationships and to identify other domains, such as coping and anger expression styles, in which angry people exhibit deficits. These domains may be utilized to diagnose, treat, or prevent anger disorders.

CONCEPTUALIZATIONS OF ANGER DISORDERS

The current practice is to conceptualize anger as a subtype of existing diagnostic categories. For example, a person who meets clinical criteria for depression and presents as hostile would likely be diagnosed as having a depressive disorder with irritable mood. By considering anger a component of other disorders, clinicians may largely ignore the angry presentation of the client and potential problems related to anger may go untreated. Instead, the treatment would focus on depression. Often it may be difficult to distinguish among depression, anxiety, and anger because they are frequently comorbid disorders (Endler & Parker, 1990; Silva, 1997).

However, there is evidence that anger problems frequently exist in individuals without symptoms of anxiety or depression. Fava, Anderson, and Rosenbaum (1990, 1993) describe "anger attacks," which refer to brief periods of anger out of proportion to what is considered appropriate in the situation and accompanied by a feeling of being out of control. These researchers found that patients' descriptions of the physiological responses in anger attacks were similar to panic attack descriptions, characterized by tachycardia, sweating, flushing, and feeling out of control. However, the patients with anger attacks did not report the affect usually associated with panic and did not meet criteria for other established disorders. Approximately 43-48% of depressed patients also reported experiencing anger attacks, and these attacks were established to

be separate diagnostically from anxiety or depression, because the main affective characteristic was of hostility and anger (Fava et al., 1993). The researchers therefore argue that anger attacks appear to represent a discrete clinical syndrome, worthy of a separate diagnostic category. Further evidence from pharmacological studies (Coccaro, Harvey, Kupsaw-Lawrence, Herbert, & Bernstein, 1991; Fava et al., 2000) and discriminant studies (Edmondson, Rice, Campos, & Gechter, 2001; Whatley, Foreman, & Richards, 1998) indicate that certain people suffer from a comorbid anger problem that is not part of another clinical syndrome. The findings also suggest that some people suffer from anger alone, without symptoms of depression or anxiety.

Because anger does not have its own category in the DSM-IV, less research exists exclusively on the topic of anger compared to depressive and anxiety disorders. If anger can be proven to be a discrete syndrome that impairs individuals, then it would be useful to have a separate category for anger disorders, thereby encouraging increased research on anger and the development of treatments specific to anger. In order to prove that anger is a unique clinical syndrome, one would have to provide evidence that people high in anger are qualitatively different from people without such anger. One purpose of this study was to investigate whether problem anger impairs the social lives of people who suffer from it. This evidence would support one of the criteria for an affective disorder in the DSM-IV.

COPING AND ANGER EXPRESSION STYLES

The development of an anger disorder may be related to maladaptive attempts to deal with the experience of anger. In anger-provoking situations, people develop a unique repertoire of coping and anger expression styles. People who develop adaptive and effective coping and expression styles will likely resolve the situations that cause anger. However, people who develop less effective coping and expression may aggravate the situation further, causing an increase in anger and problems. Thus, coping and expression may mediate the relationship between an emotion and its outcome. Identification of the coping and anger expression styles employed by dysfunctionally angry people compared to adaptively angry people may assist the development of appropriate treatments.

Coping can be defined as responses that serve to alter the environment to reduce demands or to increase personal resources to address demands (Hobfoll, Dunahoo, Ben-Porath, & Monnier, 1994; Lazarus & Folkman, 1984). Coping that creates positive affect is considered healthy and effective and may include reframing, problem solving, and infusing

events with positive meaning (Folkman & Moskowitz, 2000). These strategies alter the environment or the perception of the environment in a positive way and are therefore likely to alleviate negative emotions. Ineffective coping, in contrast, is likely associated with increased emotional arousal. In emotional disorders, negative emotions and ineffective coping can contribute to an escalation of negative mood.

Some investigations of anger support the idea that coping styles are related to anger disorders. In previous work, anger was negatively related to problem-focused coping across time and was associated with more aggressive action, antisocial action, and cautious action (Whatley et al., 1998). Social support seeking and joining were associated with reductions in all forms of psychological distress (Monnier et al., 1998; Whatley et al., 1998). Presumably, these coping strategies would also reduce problem anger because they reduce all psychological stress. Therefore, people high in anger were predicted to use more aggressive action, antisocial action, cautious action, and indirect action, while using less social support seeking and social joining.

Anger is a socially constructed emotion; therefore, it is felt and expressed in ways that are socially mandated within a culture and deviance from these mandates is considered dysfunctional (Kassinove & Sukhodolsky, 1995). Within American culture, physical violence and emotional trauma are considered dysfunctional anger expression styles, and are addressed by our legal system. Therefore, angry people were predicted to use anger expression styles that are considered dysfunctional, including physical assaults on people and objects, verbal assaults and arguing, and other negative behaviors. Angry people were also predicted to use fewer adaptive anger expressions, including time-out or reciprocal communication, compared to nonangry people.

OVERVIEW OF THE PRESENT STUDY

In the present study, differences between people with potentially dysfunctional anger problems and people without such problems were investigated in two groups: college students and people mandated to undergo anger management treatment. College students were compared to people in anger management because people in treatment have been deemed to have problem anger. In addition, college students and anger management people were classified as having potentially dysfunctional anger if they scored above a standard cutoff on an anger scale (Spielberger, 1996). These two classifications of angry individuals were utilized in this study to discriminate between the effects of anger in average people with high trait anger and people labeled by society as problematically angry. For the purpose of identifying clinical differences, the

anger management group is of primary interest. First, the extent to which people classified as having dysfunctional anger indicated disturbances in their social, occupational, or romantic relationships was investigated. It was hypothesized that angry people would maintain fewer relationships and report lower satisfaction and greater conflict in these relationships than nonangry people. Next, whether people classified as having high anger utilized different coping styles and anger expression styles than other people was investigated. It was hypothesized that angry individuals, compared to nonangry people, would report coping and anger expression styles that were less effective, more antisocial, and more aggressive.

METHOD

PARTICIPANTS

Participants from two samples were included. The college sample consisted of 114 undergraduate students (53 males, 61 females) at a large university who received partial course credit for participation. The mean age of participants was 19.85 years ($SD = 2.63$). The ethnicity was fairly representative of the campus population (42.1% Hispanic American, 36.0% Caucasian, 10.5% Asian American, 6.1% African American, and 5.3% other).

The anger management sample consisted of 66 participants (38 males, 28 females) referred for anger management treatment by the court system at a center in the same city as the university. The participants completed the present study as part of their intake paperwork for the center and gave verbal consent for their data to be used in this study. The mean age of participants was 31.35 years ($SD = 11.39$). The ethnicity of the sample was fairly representative of the larger city population (45.2% Hispanic American, 40.3% Caucasian, 11.3% African American, 1.6% Asian American, and 1.6% other). The Asian American populations in the two samples were slightly underrepresented in this sample relative to the general city population.

MATERIALS AND PROCEDURE

Participants were asked to complete a series of questionnaires, which were counterbalanced to eliminate any order effects. As a measure of anger, participants completed the trait portion of the State-Trait Anger Inventory, a well-established test (STAXI; Spielberger, 1996). Respondents rated 10 anger-related statements ($\alpha = .88$) on a four-point scale, ranging

from *not at all* (1) to *very much so* (4). An example statement was, "I have a fiery temper."

Participants also completed a Life Experiences Questionnaire concerning current and past relationships (DiGiuseppe, Tafrate, & Eckhardt, 2000). Questions asked about the quality, quantity, nature, and frequency of disagreements in friendships, romantic relationships, and work relationships. Although the reliability of this measure has not been fully established, it appears to have high face validity. Some questions ask participants to provide a numerical answer, such as "Number of friendships ended due to conflict." Other questions ask participants to provide responses on a Likert-type scale, for example, "How often do you experience verbal conflicts with your romantic partner?" Participants are then asked to rate the statement on a scale ranging from *several times a day* (1) to *once every few years* (7) to *never* (8).

Next, participants completed the Strategic Approaches to Coping Inventory (SACS; Hobfoll, Dunahoo, & Monnier, 1997), which measures nine coping styles. These include: (1) Avoidance ($\alpha = .78$)—avoid the situation, (2) Assertive Action ($\alpha = .50$)—be firm in their actions, (3) Aggressive Action ($\alpha = .73$)—be firm, yet not hurt others, (4) Antisocial Action ($\alpha = .71$)—be forceful and would hurt or manipulate others, (5) Support Seeking ($\alpha = .80$)—consult with others about what they should do, (6) Social Joining ($\alpha = .64$)—make others in the situation more comfortable, (7) Cautious Action ($\alpha = .59$) - think before making a decision or acting, (8) Instinctive Action ($\alpha = .78$)—do whatever occurred to them first, and (9) Indirect Action ($\alpha = .73$)—resolve the problem without directly confronting it. The inventory includes 52 statements, and participants rate the degree to which each reflects their own behavior on a 5-point scale, ranging from *not at all what I would do* (1) to *very much what I would do* (5).

Expression of anger was measured by the Revised-Anger Expression Inventory (Deffenbacher, Oetting, Lynch, & Morris, 1996), which taps three major components of anger. The first component involves the expression of anger directed inward (Anger-In, $\alpha = .72$). The second component includes the extent to which a person attempts to control the expression of anger (Anger Control, $\alpha = .33$). The third component involves the expression of anger toward other people or objects (Anger-Out). This inventory includes a number of subcategories of Anger-out expressions. These include physical assault on people ($\alpha = .18$), physical assault on objects ($\alpha = .86$), noisy arguing ($\alpha = .87$), verbal assault ($\alpha = .85$), reciprocal communication ($\alpha = .87$), time-out ($\alpha = .88$), and nonverbal negative responses (e.g. glaring, $\alpha = .83$).

RESULTS

All analyses were 2 (male or female) × 2 (high or low anger) × 2 (anger management or college students) ANOVAs. Because multiple tests of this kind inflate the possibility of Type I error, all analyses were run at an alpha level of .01, except where noted. Because some readers may be interested in comparisons that do not reach this conservative level of significance, trends at $p < .05$ are also presented. To assist with identifying strong associations, eta square (denoted η^2) effect sizes are presented to indicate the strength of the relationship between the variables (Cohen, 1992). A small effect size for ANOVAs is .10, a medium effect size is .30, and a large effect size is .50.

People were classified as high or low anger based on two factors: (a) whether they were referred for court-mandated treatments and (b) scores on the STAXI, with those falling above 22 classified as "high anger" and those falling below the cutoff classified as "low anger" (Spielberger, 1996). Analyses were also run as ANCOVAs with age as a covariate; however, age did not change the relationship for any analysis and is therefore not reported.

PREVALENCE OF HIGH ANGER

In the college sample, 25.4% of participants met criteria for high anger (above 22 on the STAXI). Because these were college students, our sample likely did not include a high number of people who would be classified as angry by society. There were no differences between the high and low anger groups in age, gender, or ethnicity.

In the anger management sample, 30.8% of participants referred for anger management met criteria for high anger (above 22 on the STAXI).[1] There were no differences in the prevalence of high anger in age, gender, or ethnicity. There were no significant differences between the college sample and the anger management sample on STAXI trait anger scores

1. Because all the participants in this sample had been mandated for treatment due to encounters with the law involving anger, this low percentage appears unlikely. Furthermore, 21.6% of the sample reported that they were extremely low in trait anger (below 12 on the STAXI), which is nearly twice the 11.4% of the college student sample scoring so low in anger. These two types of anger management participants may typify two types of people: those who admit to having anger but feel they cannot control it, those who deny anger and blame others (Cartwright, 2001). For this reason, further analyses were checked for differences in this "low anger" group to investigate the new hypothesis. This investigation revealed no significant differences and is therefore not reported. It is possible that the high control anger group is simply not referred for treatment and may receive other punishment, or they may be verbally rather than physically abusive (McCann & Biaggio, 1989).

($p = .65$) or high or low anger classification ($p = .45$). College students and anger management treatment members differed on age, $F(1, 177) = 106.36$, $p < .001$, $\eta^2 = .38$, but there were no gender or ethnicity differences between the two groups.

ANGER AND INTERPERSONAL RELATIONSHIPS

Participants were asked about the frequency and quality of their romantic, occupational, and social relationships on the Life Experiences Questionnaire. Means and standard deviations are reported in Table 1. For analyses that regarded current relationships, participants responded only if they had a current relationship. Similarly questions on being single were answered only by people who were single. Therefore, the degrees of freedom for some analyses vary based on question appropriateness.

For romantic relationships, there was an interaction effect, $F(1, 167) = 6.49$, $p < .05$, $\eta^2 = .03$, such that high anger males in the anger management sample were more likely to have a current romantic relationship than low anger males and all females. In the college sample, high anger females and low anger males were more likely to have a current relationship than low anger females and high anger males. Participants in the anger management sample, compared to the college sample, also reported being in their current relationship for longer periods of time, $F(1, 114) = 35.16$, $p < .001$, $\eta^2 = .24$, single for longer periods of time, $F(1, 96) = 6.12$, $p < .05$, $\eta^2 = .06$, and involved in fewer relationships per year, $F(1, 154) = 3.72$, $p = .06$, $\eta^2 = .02$. Because the anger management sample is older, these findings are logical; however, the effects reported were consistent when controlling for the influence of age statistically.

There were also differences in the quality of and conflict involved in romantic relationships. College males were less satisfied with their current relationships than college females or the anger management sample, $F(1, 116) = 3.68$, $p = .06$, $\eta^2 = .03$. For those participants who were currently involved in a relationship, high anger participants reported more verbal conflict than low anger participants, $F(1, 119) = 6.02$, $p < .05$, $\eta^2 = .05$, and more relationships overall that included verbal conflict, $F(1, 164) = 5.60$, $p < .05$, $\eta^2 = .03$. The anger management group also reported more verbal conflict than the college group, $F(1, 119) = 25.72$, $p < .001$, $\eta^2 = .18$, and there was an interaction effect such that college males reporting less verbal conflict than college females while anger management males reported more conflict than anger management females, $F(1, 119) = 7.22$, $p < .01$, $\eta^2 = .06$. The anger management sample reported more physical conflict in their current romantic relationships compared to the college sample, $F(1, 117) = 3.94$, $p = .05$, $\eta^2 = .03$, and a greater number of

TABLE 1. Mean (Standard Deviations) and Results of ANOVAs for the Life Experiences Questionnaire

	College						Referral					
Life Experiences	**Low**		**High**		**Mean**		**Low**		**High**		**Mean**	
Changed Jobs	1.26_a	(1.35)	1.62_a	(1.37)	1.35^t	(1.36)	0.93_a	(1.27)	1.74_b	(2.00)	1.18^t	(1.56)
Frequency of Work Conflict	2.98_a	(2.08)	4.66_b	(1.99)	3.40^t	(2.18)	3.02_a	(2.58)	3.61_b	(2.55)	3.15^t	(2.57)
Job Satisfaction	3.11_a	(0.63)	2.76_a	(0.66)	3.01^t	(0.65)	3.29_a	(0.74)	3.00_b	(1.00)	3.22^t	(0.82)
Close Friends	1.01_a	(0.24)	1.07_a	(0.26)	1.03^t	(0.25)	0.81_a	(0.39)	0.90_b	(0.32)	0.84^{tt}	(0.37)
Number of Close Friends	5.06_a	(6.14)	3.75_a	(2.27)	4.72^t	(5.43)	3.47_a	(3.12)	2.47_a	(1.41)	3.18^t	(2.75)
Frequency of Friend Conflict	2.08_a	(1.67)	3.38_b	(2.09)	2.42^t	(1.86)	1.67_a	(1.85)	2.37_a	(1.77)	1.90^t	(1.83)
Friendships ended due to Conflict	0.51_a	(1.04)	0.45_a	(0.74)	0.50^t	(0.96)	1.73_a	(3.01)	2.00_a	(3.07)	1.79^{tt}	(2.99)
Romantic Relationship	0.49_a	(0.50)	0.48_a	(0.51)	0.49^t	(0.50)	0.61_a	(0.49)	0.79_b	(0.42)	0.67^t	(0.48)
Length of Romantic Relationship	2.58_a	(2.03)	2.18_a	(2.20)	2.47^t	(2.07)	4.39_a	(1.29)	4.59_a	(1.42)	4.47^{tt}	(1.32)
Length of Being Single	2.59_a	(2.08)	2.09_a	(1.76)	2.45^t	(2.00)	3.56_a	(1.97)	4.00_a	(1.00)	3.63^t	(1.83)
Romantic Satisfaction	2.52_a	(1.75)	2.04_a	(1.64)	2.38^t	(1.72)	2.96_a	(0.96)	2.59_a	(1.00)	2.85^{tt}	(0.99)
Frequency of Verbal Conflict	2.17_a	(2.20)	2.58_a	(2.70)	2.29^t	(2.35)	3.90_a	(2.07)	5.38_b	(1.78)	4.40^{tt}	(2.06)
Number of Relationships with Verbal Conflict	2.89_a	(1.35)	3.17_a	(1.42)	2.96^t	(1.37)	2.56_a	(1.30)	3.45_b	(1.23)	2.81^t	(1.34)
Frequency of Physical Conflict	0.32_a	(1.41)	0.58_a	(1.47)	0.40^t	(1.42)	1.04_a	(1.87)	1.24_a	(1.48)	1.09^t	(1.70)
Number of Relationships with Physical Conflict	1.16_a	(0.65)	1.14_a	(0.76)	1.15^t	(0.68)	1.81_a	(1.14)	2.05_a	(1.05)	1.88^{tt}	(1.11)
Number of Romantic Relations Per Year	1.97_a	(2.74)	1.36_a	(0.95)	1.82^t	(2.43)	0.84_a	(0.63)	1.12_a	(0.60)	0.94^t	(0.63)

Note. Groups with the same subscripts are not significantly different at $p < .05$ within each sample. Group means with the same superscripts are not significantly different at $p < .05$ between samples.

total relationships that included physical conflict, F (1, 164) = 34.01, $p <$ .001, η^2 = .17. Females reported more relationships in their lives that included physical conflict than males, F (1, 164) = 10.77, $p < .01$, η^2 = .06, with females in the anger management sample reporting the greatest number of relationships with physical conflict (M = 2.38, SD = 1.24).

When occupational relationships were examined, high anger participants on the STAXI reported changing jobs more often in the past year than low anger participants, F (1, 163) = 6.25, $p < .05$, η^2 = .04, reported having more conflict at work, F (1, 164) = 9.32, $p < .01$, η^2 = .05, and were less satisfied with their current work, F (1, 122) = 5.67, $p < .05$, η^2 = .04. High anger males in both samples experienced more work conflict than low anger males, while high anger college females experienced more conflict than low anger females but high anger management females experienced the same conflict as low anger females, F (1, 164) = 4.34, $p <$ .05,η^2 = .03. Males tended to change jobs more frequently than females, F (1, 163) = 4.15, $p < .05$, η^2 = .03. Males also tended to experience more conflict at work than females, F (1, 164) = 4.33, $p < .05$, η^2 = .03.

When social relationships were examined, participants in the anger management sample were less likely to have friends than the college sample, F (1, 167) = 16.19, $p < .001$, η^2 = .09, and reported fewer friends, F (1, 149) = 3.57, p = .06, η^2 = .02. Anger management participants also reported more conflict with their friends than the college sample, F (1, 161) = 4.52, $p < .05$, η^2 = .03, and more friendships ended due to conflict, F (1, 163) = 16.03, $p < .001$, η^2 = .09. High anger participants were also more likely to report conflict with their friends compared to low anger participants, F (1, 161) = 9.03, $p < .01$, η^2 = .05. For high anger males in the anger management sample and high anger females in the college sample, there is a sharp rise in conflict with friends compared to all other groups, F (1, 161) = 4.29, $p < .05$, η^2 = .03.

COPING STYLES

Coping styles were compared between the anger management and college samples, the high and low anger groups, and males and females. Means and standard deviations are reported in Table 2. Seeking social support, cautious action, and assertive action are frequently considered to be positive and effective coping styles. College participants tended to seek social support more frequently than participants in the anger management group, F (1, 162) = 8.63, $p < .01$, η^2 = .05; likewise, low anger participants tended to seek social support more than high anger participants, F (1, 162) = 5.27, $p < .05$, η^2 = .03. High anger participants were less likely to use cautious action than low anger participants, F (1,

157) = 28.26, $p < .001$, $\eta^2 = .15$. Yet those in the high anger group in the anger management sample were the least likely to use cautious action compared to any other group, F (1, 157) = 4.15, $p < .05$, $\eta^2 = .03$. There were no differences between any of the groups in the use of assertive action. Indirect action, antisocial action, aggressive action, and instinctive action are frequently considered destructive coping styles because they tend to endanger relationships and the individual. High anger participants tended to use indirect action more than low anger participants, F (1, 107) = 6.91, $p < .05$, $\eta^2 = .06$, more antisocial action, F (1, 162) = 22.23, $p < .001$, $\eta^2 = .12$, and more aggressive action, F (1, 132) = 16.91, $p < .001$, $\eta^2 = .11$. Surprisingly, participants in the college sample were more likely than the anger management sample to use antisocial action, F (1, 162) = 16.78, $p < .001$, $\eta^2 = .09$, and aggressive action, F (1, 132) = 10.78, $p < .01$, $\eta^2 = .08$. High anger males tended to use aggressive action more than high anger females, low anger females, or low anger males, F (1, 132) = 3.92, $p = .05$, $\eta^2 = .03$.

ANGER EXPRESSION STYLES

Participants were asked about how they generally expressed anger with the Revised-Anger Expression Inventory. Means and standard deviations are reported in Table 3. High anger participants reported less Anger Control than low anger participants, F (1, 166) = 9.06, $p < .01$, $\eta^2 = .05$. High anger participants reported more Anger-In than low anger participants, F (1, 165) = 13.88, $p < .001$, $\eta^2 = .08$. The Revised-Anger Expression Inventory measures a variety of Anger-Out strategies. High anger participants reported more physical assault on people than low anger participants, F (1, 166) = 8.15, $p < .01$, $\eta^2 = .05$, and more physical assault on objects, F (1, 164) = 50.62, $p < .001$, $\eta^2 = .24$. High anger participants also reported using more noisy arguing than low anger participants, F (1, 166) = 68.77, $p < .001$, $\eta^2 = .29$, and more verbal assault, F (1, 166) = 47.25, $p < .001$, $\eta^2 = .22$. High anger participants tended to use more nonverbal negative action compared to low anger participants, F (1, 163) = 34.50, $p < .001$, $\eta^2 = .18$. High anger females in the anger management sample tended to use more nonverbal negative responses than low anger females, while high anger males in the college sample tended to use more nonverbal negative responses than low anger males in the college sample, F (1, 163) = 4.69, $p < .05$, $\eta^2 = .03$. Low anger participants tended to use fewer positive anger expression styles as well. High anger participants used less reciprocal communication, F (1, 163) = 8.55, $p < .01$, $\eta^2 = .05$, and

TABLE 2. Mean (Standard Deviations) and Results of ANOVAs Coping Styles

	College						Referral					
Coping Styles	**Low**		**High**		**Mean**		**Low**		**High**		**Mean**	
Instinctive Action	3.35_a	(0.71)	3.50_a	(0.64)	3.39^t	(0.69)	3.26_a	(0.76)	3.27_a	(0.69)	3.26^t	(0.73)
Avoidant Action	3.30_a	(0.49)	3.28_a	(0.38)	3.30^t	(0.47)						
Social Joining	3.50_a	(0.61)	3.30_a	(0.47)	3.45^t	(0.58)						
Seeking Social Support	3.56_a	(0.72)	3.37_a	(0.72)	3.51^t	(0.72)	3.21_a	(1.10)	2.79_a	(1.08)	3.09^{tt}	(1.10)
Cautious Action	3.60_a	(0.59)	3.17_b	(0.69)	3.49^t	(0.64)	3.60_a	(0.96)	2.73_b	(0.84)	3.36^t	(1.00)
Indirect Action	2.86_a	(0.84)	3.36_b	(0.84)	2.98^t	(0.87)						
Antisocial Action	2.45_a	(0.77)	3.07_b	(0.65)	2.61^t	(0.79)	1.82_a	(0.80)	2.56_b	(0.94)	2.05^{tt}	(0.90)
Aggressive Action	3.25_a	(0.65)	3.75_b	(0.63)	3.38^t	(0.68)	2.59_a	(0.72)	3.28_b	(0.78)	2.84^{tt}	(0.80)
Assertive Action							3.36_a	(0.74)	3.09_a	(0.56)	3.29^t	(0.69)

Note. Groups with the same subscripts are not significantly different at $p < .05$ within each sample. Group means with the same superscripts are not significantly different at $p < .05$ between samples. Some data was unavailable due to shortened questionnaires and changes in experiment format.

time out compared to low anger participants, F (1, 165) = 28.07, $p < .001$, $\eta^2 = .15$.

SUMMARY

In summary, it appears that both high anger classification on the STAXI and membership in the anger management group were related to a decrease in frequency and quality of romantic, social, and occupational relationships. The anger management sample had more durable romantic relationships, yet these relationships were filled with verbal and physical conflict. They reported that more friendships ended due to conflict. Social and romantic relationships appeared to differ between the anger management and college sample, while occupational relationships did not. These findings partially support the hypothesis that the relationships of people referred for anger treatment would differ from a random sample. It also appears that these categories were related to differences in coping and anger expression styles. Surprisingly, the anger management sample reported using less antisocial or aggressive action to cope with stress compared to college students. Yet they also sought social support less often, a positive coping strategy. There were no differences between the two samples in anger expression styles.[2] Trait high anger participants in comparison to low anger participants reported changing jobs more frequently, more conflict at work, and being less satisfied with their current job. High anger participants also reported more conflict with friends. High anger participants reported different coping styles than low anger participants, utilizing more antisocial and aggressive ac-

2. A direct discriminant function analysis was performed using relationship questions, coping styles, and anger expression styles as predictors of membership in the anger management or college groups. Due to the large number of predictors and insufficient sample size, only significant predictors are reported here and must be interpreted with caution. Of the original 181 cases, 23 were dropped from analysis because of missing data. It was also necessary to drop some predictor variables to increase the sample size without missing data. There was a strong association between groups and the final list of significant predictors, χ^2 (6) = 61.06, $p < .001$, eigenvalue = .49. The best predictors for distinguishing between participants in the anger management and college sample were physical assault on objects, F (1, 156) = 8.85, $p < .01$, seeking social support, F (1, 156) = 6.18, $p < .05$, antisocial action, F (1, 156) = 17.75, $p < .001$, number of friendships ended due to conflict (F (1, 156) = 15.00, $p < .001$), frequency of conflict with friends, F (1, 156) = 4.33, $p < .05$, and number of relationships that involved physical conflict, F(1,156) = 27.07, $p < .001$. Similar to reported findings, people in the anger management group scored higher on physical assault on objects, number of friendships ended due to conflict, and number of relationships with physical conflict compared to the college group. The anger management group scored lower on seeking social support, antisocial action, and frequency of conflict with friends.

TABLE 3. Means (Standard Deviations) and Results of ANOVAs Anger Expression Styles

	College						Referral					
Anger Expression Styles	**Low**		**High**		**Mean**		**Low**		**High**		**Mean**	
Anger Control	3.04_a	(1.65)	2.39_b	(0.58)	2.87^t	(1.48)	2.82_a	(0.58)	2.13_b	(0.46)	2.61^t	(0.62)
Nonverbal Negative	1.88_a	(0.49)	2.21_b	(0.61)	1.96^t	(0.96)	1.64_a	(0.45)	2.37_b	(0.54)	1.88^t	(0.59)
Physical Assault People	1.21_a	(1.12)	1.62_b	(0.83)	1.32^t	(1.06)	1.26_a	(0.39)	1.71_b	(0.44)	1.39^t	(0.45)
Reciprocal Communication	2.78_a	(0.66)	2.54_a	(0.52)	2.72^t	(0.63)	2.94_a	(0.67)	2.50_b	(0.58)	2.80^t	(0.67)
Verbal Assault	1.64_a	(0.55)	2.28_b	(0.62)	1.80^t	(0.63)	1.70_a	(0.51)	2.33_b	(0.42)	1.89^t	(0.56)
Physical Assault Objects	1.26_a	(0.35)	1.75_b	(0.55)	1.38^t	(0.46)	1.45_a	(0.46)	2.02_b	(0.56)	1.62^t	(0.55)
Noisy Arguing	2.02_a	(0.65)	2.88_b	(0.77)	2.24^t	(0.77)	1.98_a	(0.56)	2.88_b	(0.51)	2.25^t	(0.68)
Time Out	2.56_a	(0.67)	2.19_b	(0.59)	2.47^t	(0.67)	2.65_a	(0.64)	1.89_b	(0.47)	2.42^t	(0.68)
Anger In	2.14_a	(0.59)	2.33_a	(0.57)	2.19^t	(0.59)	1.94_a	(0.46)	2.45_b	(0.39)	2.09^t	(0.50)

Note. Groups with the same subscripts are not significantly different at $p < .05$ within each sample. Group means with the same superscripts are not significantly different at $p < .05$ between samples.

tion but less cautious action. While expressing anger, high anger participants reported more Anger-In, physical assault on people, physical assault on objects, noisy arguing, verbal assault, and nonverbal negative action. They reported using less Anger Control, reciprocal communication, and time-out. These findings were consistent with previous literature on anger.

DISCUSSION

THE NEED FOR A DIAGNOSTIC CATEGORY

First and most importantly, a large portion of the population appears to be affected by anger problems. Everyone in the anger management sample had experienced conflicts with the law due to anger. In addition, a large portion of the sample (25% in the college sample and 31% in the anger management sample) met trait criteria for high anger. This is not necessarily dysfunctional anger, but the fact that there were differences in social, occupational, and romantic relationships based on anger classification supports the idea that for most people high anger interferes with their life. In future research, it would be useful to identify whether college students with high trait anger perceive their anger as troublesome. There are no clinical cutoffs for what is a dysfunctional level of conflict in relationships; however, the findings clearly demonstrate that high anger affects social functioning. This large percentage of the population would benefit from additional research and a diagnostic category to address their unique needs if the dysfunction reaches clinically significant levels. Kassinove edited an excellent book, *Anger Disorders* (1995), whose contributors discuss possible diagnostic categories for anger disorders.

In the college sample, most impairment associated with high anger was reported in occupational relationships, with some impairment in social and romantic relationships in the form of increased conflict. However, in the anger management sample, most impairment was reported as conflict in romantic relationships, with little reported impairment in social relationships. Angry people may experience more conflict in the relationships in which they spend the majority of their time. While college students spend the majority of social time at work or school, those in the anger management sample likely spend more social time with their spouse. Those in the anger management sample may also be more socially isolated and have fewer people to have conflict with, because they reported a lower number of friends. The romantic partner may then experience the brunt of any verbal and physical aggression.

The first hypothesis that angry people would demonstrate impairment in relationships was supported by the findings, because angry peo-

ple appeared to meet this DSM-IV criterion for mood related disorders. Although the other criteria for a disorder must still be established, it appears clear that high anger impairs the lives of individuals. Furthermore, it is possible that high anger leads to increased strain and a smaller social network over time. A high anger person may begin adult life with friends and possibly a romantic partner. As these persons grow older, they may begin to alienate their friends and are left only with a romantic partner to express anger toward. Further research should investigate whether conflicts in social and work relationships of the type shown here are predictive of later court-mandated treatment. If an identification and intervention program could be designed for high anger people before they begin developing families, the domestic violence and child abuse rates in the country might be brought down.

CONCEPTUALIZATIONS OF ANGER

There is some evidence in the findings that people referred for anger management treatment may experience something similar to the "anger attacks" described by Fava et al. (1990). We would expect that people referred for anger management and thus classified as having experienced dysfunctional anger would score higher in anger-related traits. Yet the anger management sample reported low agreement with items that might normally be associated with conceptualizations of anger. For instance, there were no differences between the anger management and college samples on STAXI anger scores, similar to findings that trait anger and violence do not necessarily concur (Furlong & Smith, 1998). Also, the college students actually scored higher on antisocial and aggressive action than people in anger therapy. These findings are counterintuitive and highly surprising.

Of course, it is possible that the people in the anger management sample were attempting to report what they considered to be "healthy" behaviors to gain social acceptance. However, this is unlikely because in the same study they stated that they experienced higher levels of verbal and physical assault with their partners. These statements are more likely to be socially unacceptable than agreeing to statements such as, "Move aggressively; often if you get another off-guard, things will work out to your advantage."

The anger management sample may experience "anger attacks": brief periods of intense anger, which are experienced as ego dystonic and out of character. Because the questionnaires asked about general behaviors, if the anger is experienced as out of character, people would state that they are not *generally* antisocial, aggressive, or angry. Future research should investigate whether these self-reports are corroborated by objec-

tive evidence or ratings by romantic partners, friends, and coworkers. If the anger episodes experienced by people who are referred for anger management are indeed brief out-of-control periods rather than a habitual anger problem, this may change the course of therapy. The primary focus then should be on learning impulse control and identifying triggers for anger episodes. Although some treatments have incorporated these elements, it would be useful to have an empirically supported rationale for the treatment.

TREATMENT IMPLICATIONS

If anger expression styles or coping styles that are related to high anger could be identified, these may be target areas for treatment during anger management therapy. The current study uncovered a variety of differences between high and low anger people. High anger people were less likely to use cautious action and social joining. The finding that they were less likely to use cautious action counters previous findings that cautious action was associated with anger (Whatley et al., 1998). High anger people were more likely to use antisocial action and aggressive action. As mentioned previously, it was surprising that the anger management sample was also less likely to use antisocial action and aggressive action to cope, while cautious action was equivalent between the two groups. The only difference in coping style that differed between college students and people referred for anger management was the tendency to seek social support. Nurturing relationships for people involved in anger management may assist in reducing anger outbursts. There were also numerous gender differences in coping styles and their relationship to anger. Because anger is an emotion that is expressed differently depending on gender, it is not surprising that coping styles varied for males and females (Cox et al., 1999; Hobfoll et al., 1994). Therefore, all attempts at intervention or prevention must be gender appropriate.

In the college and anger management samples, people classified as high in anger showed similar patterns of anger expression styles. They were less likely to control their anger and used verbal assault, nonverbal negative responses (such as giving people the finger), physical assault on objects, physical assault on people, and noisy arguing more often to express their anger. High anger people were also less likely to use time-out or reciprocal communication, two fairly positive responses to anger. Therefore, it appears that encouraging more positive anger expression styles, such as time-out and reciprocal communication, during treatment may facilitate anger management treatment or early intervention programs. It is important to note, however, that anger expression

styles were not different between the two samples, and therefore are unlikely to be a good diagnostic tool for predicting violence.

FURTHER STUDY

Clearly, this study is an exploratory one and therefore the results must be further evaluated in future research. First and foremost, research endeavors should continue to explore whether a separate diagnostic category is warranted for anger disorders. The other criteria for affective disorders in the DSM-IV and the independence of anger must be established irrefutably through research. Second, additional studies are needed to explore the difficulties encountered by angry people. These investigations may uncover resources and areas to target for change during intervention. Third, it would be useful to investigate predictors of later domestic violence. An interesting investigation would be to analyze whether young adults who were encountering problems in their occupational and social relationships and scored in ways consistent with the anger expression and coping styles for angry people reported here were referred by the courts for anger treatment or arrested later in life. Therapists are increasingly called upon to treat angry people, and we must develop diagnostic, treatment, and prevention strategies to meet this growing demand.

REFERENCES

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Beck, R., & Fernandez, E. (1998). Cognitive-behavioral therapy in the treatment of anger: A meta-analysis. *Cognitive Therapy and Research, 22,* 63-74.

Browne, A. (1993). Violence against women by male partners. *American Psychologist, 48,* 1077-1087.

Cartwright, D. (2001). The role of psychopathology and personality in rage-type homicide: A review. *South African Journal of Psychology, 31,* 12-19.

Coccaro, E.F., Harvey, P.D., Kupsaw-Lawrence, Herbert, J.L., & Bernstein, D.P. (1991). Development of neuropharmacologically based behavioral assessments of impulsive aggressive behavior. *Journal of Neuropsychiatry, 3,* S44-S51.

Cohen (1992). A power primer. *Psychological Bulletin, 112*, 155-159.

Cox, D.L., Stabb, S.D., & Bruckner, K.H. (1999). *Women's anger: Clinical and developmental perspectives*. Ann Arbor, MI: Braun-Brumfield.

Deffenbacher, J.L., Oetting, E.R., Lynch, R.S., & Morris, C.D. (1996) The expression of anger and its consequences. *Behaviour Research & Therapy, 34,* 575-590.

DiGiuseppe, R., Tafrate, R., & Eckhardt, C.I. (2000). *Structured Interview for* Anger/Hostility Disorders. Unpublished manuscript.

Edmondson, C.B., Conger, J.C. (1996). A review of treatment efficacy for individuals with

anger problems: Conceptual, assessment, and methodological issues. *Clinical Psychology Review, 16,* 251-275.

Edmondson, C.B., Rice, T.M., Campos, E., & Gechter, G. (2001, November). *Anger attacks in* depression and anxiety. Poster presented at the Association for Advancement of Behavior Therapy, Philadelphia, PA.

Endler, N.S., & Parker, J.D. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality & Social Psychology, 58,* 844-854.

Fava, M., Anderson, K., & Rosenbaum, J.F. (1990). "Anger attacks": Possible variants of panic and major depressive disorders. *American Journal of Psychiatry, 147,* 867-870.

Fava, M., Anderson, K., & Rosenbaum, J.F. (1993). Are thymoleptic-responsive "anger attacks" a discrete clinical syndrome? *Psychosomatics, 34,* 350-354.

Fava, M., Vuolo, R.D., Wright, E.C., Nierenberg, A.A., Alpert, J.E., & Rosenbaum, J.F. (2000). Fenfluramine challenge in unipolar depressed with and without anger attacks. *Psychiatry Research, 94,* 9-18.

Folkman, S., & Moskowitz, J.T. (2000). Positive affect and the other side of coping. *American Psychologist, 55,* 647-654.

Furlong, M.J., & Smith, D.C. (1998). Raging Rick to Tranquil Tom: An empirically based multidimensional anger typology for adolescent males. *Psychology in the Schools, 35,* 229-245.

Grieger, R.M. (1986). Anger problems. In A. Ellis and R. Grieger (Eds.), *Handbook of* rational-emotive therapy (Vol. 2, pp. 121-140). New York: Springer Publishing.

Hobfoll, S.E., Dunahoo, C.L., Ben-Porath, Y., & Monnier, J. (1994). Gender and coping: The dual-axis model of coping. *American Journal of Community Psychology, 22,* 49-82.

Hobfoll, S.E. Dunahoo, C.L., & Monnier, J. (1997). *Preliminary test manual: Strategic approaches to coping scale.* Unpublished manuscript.

Kassinove, H. (Ed.) (1999). *Anger disorders: Definition, diagnosis, and treatment series in clinical and community psychology.* Philadelphia, PA: Taylor & Francis.

Kassinove, H., & Sukhodolsky, D.G. (1995). Anger disorders: Basic science and practice issues. In H. Kassinove (Ed.), *Anger disorders: Definition, diagnosis, and treatment.* (pp. 1-26). Philadelphia, PA: Taylor & Francis.

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer Publishing Co.

McCann, J.T., & Biaggio, M.K. (1989). Narcissistic personality features and self-reported anger. *Psychological Reports, 64,* 55-58.

Monnier, J., Stone, B.K., Hobfoll, S.E., & Johnson, R.J. (1998). How antisocial and prosocial coping influence the support process among men and women in the U.S. postal service. *Sex Roles, 39,* 1-20.

Novaco, R.W. (1975). Anger control: The development and evaluation of an experimental treatment. Lexington, MA: Lexington Books.

Silva, T.M. (1997). *Coping style, gender, and the experience of depression, anxiety, and anger.* Unpublished master's thesis California State University, Fresno.

Spielberger, C.D. (1996). *State-trait anger expression inventory professional manual.* Odessa, FL: Psychological Assessment Resources.

Stein, N.L., & Levine, L.J. (1989). The causal organization of emotional knowledge: A developmental study. *Cognition and Emotion, 3,* 343-378.

Terjesen, M.D., Digiuseppe, R., & Naidich, J. (1997). REBT for anger and hostility. In J. Yankura & W. Dryden (Eds.), *Using REBT with common psychological problems.* (pp. 158-196). New York: Springer Publishing Co.

Whatley, S.L., Foreman, A.C., & Richards, S. (1998). The relationship of coping style to dysphoria, anxiety, and anger. *Psychological Reports, 83,* 783-791.

Copyright of Journal of Social & Clinical Psychology is the property of Guilford Publications Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.