Anger and Aggression in Psychiatric Outpatients

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Background: This study sought to evaluate the degree of anger and aggression experienced by psychiatric outpatients and to determine whether anger is as prominent an emotional state in these patients as are depression and anxiety. We also sought to determine which Axis I and Axis II disorders were associated with increased rates of subjective anger and aggressive behavior.

Method: 1300 individuals presenting to a psychiatric outpatient practice underwent semistructured interviews to evaluate current DSM-IV Axis I (N = 1300) and Axis II disorders (N = 687). Levels of subjective anger and aggression during the preceding week were assessed in each patient, and the odds ratios were calculated for each disorder. A multiple regression analysis was performed to determine which psychiatric disorders independently contributed to the presence of subjective anger and aggressive behavior.

Results: Approximately one half of our sample reported currently experiencing moderate-to-severe levels of subjective anger, and about one quarter had demonstrated aggressive behavior in the preceding week. This level of anger was found to be comparable to the levels of depressed mood and psychic anxiety reported by our sample. Major depressive disorder, bipolar I disorder, intermittent explosive disorder, and cluster B personality disorders independently contributed to the presence of both anger and aggression.

Conclusion: Anger and aggression are prominent in psychiatric outpatients to a degree that may rival that of depression and anxiety; it is therefore important that clinicians routinely screen for these symptoms.

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It is commonly believed that there is an association between aggressive behavior and mental illness. However, much of the research attempting to unravel the relationship between anger and aggression and affective, anxiety, substance use, and personality disorders has yielded equivocal or contradictory results.

Freud[1] originally postulated that depression resulted from anger turned inward following the loss of an object. Recent studies have often supported this theory. In a study of 37 depressed patients, for example, Schless et al.[2] reported that the degree of hostility turned inward was correlated with the severity of the depressive episode. Other studies have confirmed that depressed individuals have significantly higher rates of aggression than nondepressed controls[3–8] and that anger and aggression tend to decrease once the depressive episode subsides.[9–11] On the other hand, Friedman[9] reported *less* verbal hostility in a cohort of 190 depressed patients compared with a nondepressed control group, and Fava et al.[12] found that hostility was increased only in those depressed patients who had *not* experienced a loss—the opposite of what Freud had theorized.

A relationship between anxiety and anger has received increased attention recently following a series of studies by Fava and colleagues describing the phenomenology and treatment of "anger attacks."[13–15] Fava et al. theorized that because the presentations of anger attacks and panic attacks resemble each other, they may share a similar underlying pathophysiology. Several studies have confirmed increased rates of anger attacks in patients with panic disorder and agoraphobia.[7,16] Anger and irritability are among the symptom criteria used to make the diagnosis of posttraumatic stress disorder (PTSD), and, not surprisingly, PTSD has been found to be associated with high levels of anger.[17] Other studies, however, have reported that the presence of an anxiety disorder is either not independently associated with aggressive behavior[6,18] or is associated with *lower* rates of aggression.[5,19]

Epidemiologic studies have demonstrated that alcohol and drug abuse are associated with significantly higher rates of aggressive behavior, particularly when compounded by psychiatric comorbidity.[4–6] Alcohol abuse, of course, would be expected to disinhibit anger and aggression in susceptible individuals. Surprisingly, several studies involving psychiatric inpatients have found that substance abuse is associated with *lower* rates of violent behavior.[20–22] One explanation given for this latter finding is that substance abusers may not be prone to violence in

the hospital, but may be once they leave the hospital and the substance of abuse is readily available.[23]

An association between aggressive behavior and personality pathology has long been held.[24] Supporting evidence includes studies showing that rates of Axis II disorder diagnoses are higher in individuals who commit acts of violence at home,[4,25] violent prisoners,[5,26] and violent psychiatric inpatients.[20,27] Most of these studies, however, have focused on patients with antisocial personality disorder, a disorder in which aggressive behavior constitutes a symptom. One large study that evaluated DSM-IV personality disorder diagnoses in a large cohort of depressed subjects found that anger attacks were especially common in subjects who met criteria for a cluster B or C personality disorder diagnosis.[8] In a post hoc analysis, the investigators removed the 3 items in the borderline personality disorder diagnosis related to anger and found that anger attacks were still significantly more common in these patients. Another study that evaluated aggressive behavior across all of the personality disorder diagnoses found that 6 different personality disorders were associated with aggressive behavior.[18] However, after gender and comorbid conditions were controlled for, only paranoid and passive-aggressive personality disorders independently predicted aggressive behavior.

One possible reason for the disparate findings is that researchers have often utilized different instruments to rate anger and aggression and have used different methods to make psychiatric diagnoses. In addition, different populations of subjects, e.g., psychiatric inpatients, community samples, forensic patients, and research volunteers, have been studied, and different markers of aggression have been used, e.g., violence at home, violence during psychiatric hospitalization, and lifetime history of violence. Finally, most studies have screened for only a limited number of psychiatric disorders, making it impossible to control for confounding disorders and to evaluate the independent contributions of Axis I and Axis II disorders.

Of direct relevance to practicing clinicians, the present literature has largely focused on a past history of violence rather than current levels of aggression. Although prior violent behavior is predictive of future violence,[19] a patient's current state of mind is clearly of greater importance to the treating clinician. Furthermore, most studies to date have evaluated violence, and little attention has been paid to the subjective symptoms of anger, irritability, and aggressive behavior. Such symptoms can be extremely distressing and impairing, and not uncommonly are reasons for presenting for treatment.[28] Lastly, only a handful of studies have been performed evaluating levels of anger and aggression in psychiatric outpatients, and these studies have been limited by small sample sizes and have evaluated only a limited number of psychiatric diagnoses.

In the present report, we sought to evaluate the prevalence of anger and aggression in a large sample of psychiatric patients who presented to our outpatient practice. Our focus is on anger and aggression as *symptoms*. Thus, we evaluated each patient who presented for treatment at our outpatient psychiatric practice and assessed current levels of subjective anger, and also determined whether each patient had engaged in such behaviors as shouting, throwing things, or fighting in the preceding week. We were particularly interested in determining whether subjective anger was as prominent a symptom in our sample as were depressed mood and psychic anxiety. In addition, we sought to determine which psychiatric disorders were most likely to be associated with high levels of anger and aggression. Our analysis is based on 1300 patients who presented to our outpatient psychiatric practice and underwent a comprehensive diagnostic evaluation as part of the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project. Current levels of anger and aggression were evaluated at baseline for each patient using 2 items drawn from the Schedule for Affective Disorders and Schizophrenia (SADS). Our diagnostic evaluation includes most major psychiatric diagnoses listed in DSM-IV and therefore affords us the opportunity to examine levels of anger and aggression in many disorders that typically have not been included in prior studies. Having evaluated Axis II disorders in a subset of patients, we also sought to determine the degree to which Axis I and Axis II disorders independently contributed to the presence of anger and aggression.

Although there is some inconsistency in the literature, on the basis of our review we hypothesized that major depressive disorder (MDD), bipolar disorder, panic disorder, PTSD, intermittent explosive disorder (IED), substance use disorders, and personality disorders (especially cluster B) would all be associated with increased rates of anger and aggression.

METHOD

Thirteen hundred patients aged 18 to 80 years were evaluated in the Rhode Island Hospital Department of Psychiatry outpatient practice (Providence, R.I.). The Rhode Island Hospital Institutional Review Board approved the research protocol, and all patients provided informed written consent. This practice group predominantly treats individuals with medical insurance (including Medicare but not Medicaid) on a fee-for-service basis and is distinct from the hospital's outpatient residency training clinic. During their first visit, all patients were interviewed with the Structured Clinical Interview for DSM-IV (SCID).[29] The SCID was modified after the first 100 patients were interviewed to include a module that evaluated each of the impulse-control disorders (IED, kleptomania, pathological gambling, trichotillomania, and pyromania). Only diagnoses that were current were analyzed; those diagnoses that met criteria in the past or were in partial remission

Table 1. Severity of Subjective Anger and Overt Expression of Anger in 1300 Psychiatric Outpatients

Rating	Level of Anger	N	(%)
Level of subjective anger during the preceding week			
0	Not at all, or clearly of no clinical significance	217	(16.7)
1	Slight and of doubtful clinical significance	182	(14.0)
2	Mild, eg, definitely more than called for by the situation but only occasional and never very intense	237	(18.2)
3	Moderate, eg, often aware of feeling quite angry or occasionally feeling very angry	324	(24.9)
4	Marked, eg, most of the time aware of feeling quite angry or often feeling very angry	263	(20.2)
5	Extreme, eg, almost constantly aware of feeling very angry	77	(5.9)
Level of overt expression of anger during the preceding week			
0	Not at all, only subjectively felt, or associated with manic symptoms	551	(42.4)
1	Slight, eg, occasional snappiness which is of doubtful clinical significance	205	(15.8)
2	Mild, eg, somewhat argumentative, quick to express annoyance	240	(18.5)
3	Moderate, eg, often shouts, loses temper	223	(17.2)
4	Marked, eg, throws things, breaks windows, occasionally assaultive	75	(5.8)
5	Extreme, eg, repeatedly violent against things or persons	6	(0.5)

were not included. Further details of our baseline evaluation are presented elsewhere.[30]

The SCID was supplemented with several items drawn from the SADS.[31] Two of these items were used to evaluate levels of subjective anger and overt expression of anger during the preceding week. The anchor points and frequency distributions for each of these items are depicted in Table 1. In analyzing our results, we transformed these ratings into dichotomous variables. Subjective anger was defined as present if a SADS rating of 4 or 5 was obtained, and overt expression of anger (aggression) was defined as present if a rating of 3 or greater was obtained. We chose these cutoff scores based on the frequency distributions of ratings for each symptom as presented in Table 1. No attempt was made to analyze the data set based on other cutoff scores. Interrater reliability ratings were obtained from 24 joint interviews. Kappa values for the subjective anger and overt expression of anger items were 0.81 and 0.75, respectively, indicating good-to-excellent interrater reliability. The reliability ratings for psychiatric diagnoses are presented elsewhere.[30]

To compare levels of subjective anger with levels of depressed mood and psychic anxiety, we utilized the corresponding SADS items that rate these symptoms. All 3 of these symptoms have comparable rating scales and anchor points in the SADS, and for this comparison, we used the same cutoff score of 3 or greater, which corresponds to a moderate-to-severe degree of symptomatology.

Axis II disorders were diagnosed using the Structured Interview for DSM-IV Personality Disorders (SIDP).[32] The SIDP was incorporated into the protocol for only the last 700 patients, and, therefore, Axis II diagnoses were obtained only on a subset of 687 patients (13 of the 700 patients did not undergo an Axis II evaluation). All diagnostic raters were psychologists or college graduate research assistants who underwent extensive training as reported elsewhere.[30]

The prevalence of subjective anger and the overt expression of anger was determined for all Axis I disorders in which a minimum of 10 patients received the diagnosis. Because sample sizes for many Axis II disorders were small, we evaluated both anger variables across personality disorder clusters rather than across individual personality disorders.

For both anger and aggression, odds ratios and confidence intervals (CIs) were calculated for each diagnostic entity. Because of the high comorbidity rates between various psychiatric disorders, we also conducted a multiple regression analysis (anger and aggression were analyzed as continuous rather than as dichotomous variables in this model). In doing so, we first determined whether age and gender were significantly associated with subjective anger and aggression. If they were significantly associated, we entered age and gender into the regression analysis that included each of the Axis I disorders found to be significantly associated with anger and aggression. In a separate analysis, we entered age and gender (if significant) into a regression analysis with each of the 3 personality disorder clusters. This analysis included only the 687 patients who underwent an Axis II diagnostic evaluation. Finally, using this same subset of patients, we entered age and gender (if significant) and each of the significantly associated Axis I and Axis II disorders into a multiple regression analysis to determine the independent contributions across each axis. The rationale for analyzing Axis I and Axis II disorders separately at first was to allow comparisons with other studies that may have focused on only 1 axis.

RESULTS

Demographic and Clinical Features

Of the 1300 patients included in the present study, 807 (62.1%) were female and 493 (37.9%) were male. The mean ± SD age of this cohort was 38.1 ± 11.7 years. Most patients were white (88.8%), 89.5% had at least a high school diploma, and almost half (46.4%) were either married or living with someone. In the total sample, 62.2% of

Table 2. Rates and Odds Ratios of Subjective Anger and Overt Expression of Anger Across Current Axis I Disorders in 1300 Psychiatric Outpatients[a]

Patient Group	N	Subjective Anger	Odds Ratio (95% CI)[b]	Overt Expression of Anger	Odds Ratio (95% CI)[b]
Total sample	1300	26.2	…	23.4	…
Mood disorders					
Major depressive disorder	608	36.3	2.8 (2.1 to 3.6)	27.3	1.5 (1.2 to 2.0)
Dysthymic disorder	88	31.3	0.9 (0.5 to 1.5)	21.6	0.9 (0.5 to 1.5)
Bipolar I, depressed	17	52.9	3.2 (1.2 to 8.5)	47.1	3.0 (1.1 to 7.8)
Bipolar II, depressed	36	33.3	1.4 (0.7 to 2.9)	30.6	1.5 (0.7 to 3.0)
Any depressive disorder	809	33.1	2.9 (2.2 to 3.9)	27.4	1.9 (1.4 to 2.5)
Anxiety disorders					
Panic disorder with agoraphobia	50	36.0	1.6 (0.9 to 2.9)	28.0	1.3 (0.7 to 2.4)
Panic disorder without agoraphobia	176	37.5	1.9 (1.3 to 2.6)	35.2	2.0 (1.4 to 2.8)
Social phobia	357	33.9	1.7 (1.3 to 2.2)	28.2	1.4 (1.1 to 1.9)
PTSD	158	49.4	3.3 (2.3 to 4.6)	41.1	2.6 (1.9 to 3.7)
GAD	203	31.5	1.4 (1.0 to 1.9)	34.5	1.9 (1.4 to 2.7)
OCD	109	35.8	1.6 (1.1 to 2.5)	31.2	1.5 (1.0 to 2.4)
Specific phobia	147	34.7	1.6 (1.1 to 2.3)	37.4	2.2 (1.5 to 3.1)
Any anxiety disorder	708	31.4	1.8 (1.4 to 2.4)	28.1	1.8 (1.4 to 2.4)
Any adjustment disorder	49	20.4	0.7 (0.4 to 1.5)	20.4	0.8 (0.4 to 1.7)
Substance abuse/dependence					
Alcohol	107	26.2	1.0 (0.6 to 1.6)	26.2	1.2 (0.8 to 1.9)
Drug	51	35.3	1.6 (0.9 to 2.8)	39.2	2.2 (1.2 to 3.9)
Any substance	136	29.4	1.2 (0.8 to 1.8)	30.1	1.5 (1.0 to 2.2)
IED	40	72.5	5.0 (2.6 to 9.6)	62.5	9.4 (4.7 to 19.1)
Impulse-control disorder[c]	108	36.1	1.7 (1.1 to 2.5)	39.8	2.4 (1.6 to 3.6)
Eating disorder[d]	12	41.7	2.0 (0.6 to 6.4)	41.7	2.4 (0.7 to 7.5)
Somatoform disorder[e]	92	43.5	2.3 (1.5 to 3.6)	33.7	1.7 (1.1 to 2.7)
Attention-deficit/hyperactivity disorder	56	32.1	0.9 (0.5 to 1.7)	25.0	1.6 (0.9 to 2.8)

[a]Abbreviations: CI = confidence interval, GAD = generalized anxiety disorder, IED = intermittent explosive disorder, OCD = obsessive-compulsive disorder, PTSD = posttraumatic stress disorder.
[b]CIs that do not include 1.0 are significant.
[c]Includes pathological gambling, trichotillomania, kleptomania, pyromania, and impulse-control disorders not otherwise specified, but does *not* include IED.
[d]All 12 patients were diagnosed with bulimia; no patients were diagnosed with anorexia.
[e]Includes somatization disorder, undifferentiated somatoform disorder, pain disorder, hypochondriasis, and body dysmorphic disorder.

patients were diagnosed with a current affective disorder; 54.5%, with a current anxiety disorder; 8.2%, with a substance use disorder; 7.2%, with a somatoform disorder; 4.3%, with attention-deficit/hyperactivity disorder; 4.3%, with an impulse-control disorder; 3.8%, with an adjustment disorder; and 2.2%, with an eating disorder.

Overall Rates of Anger and Aggression

At least moderate levels of subjective anger were experienced by over one half of the patients presenting to our practice, and over one quarter reported experiencing marked or extreme levels of anger in the preceding week (Table 1). Aggression was less commonly reported, and 42.4% of our patients reported no overt expressions of anger during the preceding week. Still, nearly one quarter reported experiencing at least moderate levels of aggression.

In comparing rates of subjective anger with rates of depressed mood and psychic anxiety, we found that 55.5% of our sample were rated on the SADS as having a depressed mood in the moderate-to-severe range and 44.8% were rated as having moderate-to-severe levels of psychic anxiety. Thus, subjective anger, which was rated as moderate to severe for 51.1% of our sample, appears to be just as frequent as these 2 emotional states.

Predictors of Subjective Anger

The prevalence of subjective anger and overt expression of anger is presented for each of the Axis I disorders in Table 2 and for the Axis II disorders in Table 3. Odds ratios indicate that IED, PTSD, bipolar I disorder, MDD, and somatoform disorders were the current Axis I disorders most likely to be associated with subjective anger. Anger was not significantly associated with substance abuse or dependence.

Our analyses of Axis II disorders revealed that patients diagnosed with any personality disorder were 2.6 (CI = 1.8 to 3.7) times more likely to report experiencing subjective anger. Anger was especially prominent in patients diagnosed with a cluster B personality disorder, who were 4.6 (CI = 2.9 to 7.4) times more likely to be angry than other patients.

Table 3. Rates and Odds Ratios of Subjective Anger and Overt Expression of Anger Across Personality Disorder Clusters in 687 Psychiatric Outpatients[a]

Patient Group	N	Subjective Anger	Odds Ratio (95% CI)[b]	Overt Expression of Anger	Odds Ratio (95% CI)[b]
Total sample	687	27.1	…	25.5	…
Cluster A	44	50.0	2.9 (1.6 to 5.4)	45.5	2.6 (1.4 to 4.9)
Cluster B	87	57.5	4.6 (2.9 to 7.4)	57.5	5.1 (3.2 to 8.2)
Cluster C	144	38.9	2.0 (1.4 to 3.0)	34.0	1.7 (1.1 to 2.5)
Any personality disorder	206	40.8	2.6 (1.8 to 3.7)	36.9	2.3 (1.6 to 3.2)

[a]Abbreviation: CI = confidence interval.
[b]CIs that do not include 1.0 are significant.

To determine which factors uniquely contributed to the presence of anger, we first evaluated age and gender as predictors of anger. Younger age, but not gender, was significantly ($p < .01$) associated with the presence of subjective anger. After age was entered into a multiple regression analysis along with each of the 10 Axis I disorders listed in Table 2 that were found to be significantly associated with subjective anger, MDD, bipolar I disorder, PTSD, social phobia, specific phobia, somatoform disorders, and IED (but not panic disorder, obsessive-compulsive disorder [OCD], or impulse-control disorders other than IED) were found to independently contribute to subjective anger (Table 4).

We next performed the same analysis for Axis II disorders. Here, male sex, but not young age, predicted subjective anger. Clusters B and C personality disorders were both significantly associated with subjective anger.

Finally, in the 687 patients who underwent both the Axis I and Axis II evaluation, we performed a multiple regression analysis that included age, gender, and each of the diagnoses that were found to be significantly associated with subjective anger in the above analyses. MDD, bipolar I disorder, PTSD, specific phobia, IED, and cluster B personality disorder were the disorders that made unique contributions to the presence of subjective anger. This model predicted 19.5% of the variance (multiple $R = 0.46$, $p < .001$). Somatoform disorders, social phobia, and cluster C personality disorders were no longer significant predictors of anger.

Predictors of Aggression

In univariate analyses, each of the Axis I disorders associated with subjective anger was also found to be associated with the overt expression of anger. In addition, generalized anxiety disorder (GAD) and drug abuse or dependence were associated with increased rates of aggression. Odds ratios indicate that current diagnoses of IED, bipolar I disorder, and PTSD were the Axis I disorders most likely to be associated with current aggressive behavior (Table 2).

We performed the same series of multiple regression analyses to determine which Axis I and Axis II disorders were associated with the overt expression of anger (Table 5). Young age, but not gender, was associated with increased rates of aggression, and this was entered into the model along with each of the 12 Axis I disorders that were significantly associated with aggressive behavior. MDD, bipolar I disorder, PTSD, GAD, specific phobia, IED, impulse-control disorders other than IED, and drug abuse or dependence all independently contributed to overt aggression. Panic disorder with agoraphobia, social phobia, OCD, and somatoform disorders did not make independent contributions.

In our regression analysis of Axis II disorders, clusters B and C personality disorders were significantly associated with overt aggression. On entering age, gender, the 8 associated Axis I disorders, and personality disorder clusters B and C into a multiple regression equation, we found that MDD, bipolar I disorder, GAD, IED, drug abuse or dependence, and cluster B personality disorder all independently predicted aggressive behavior. This model predicted

Table 4. Hierarchical Regression Analyses Predicting Subjective Anger Across Axis I Disorders, Axis II Disorders, and Both Axis I and Axis II Disorders[a]

Variable	β	t	p
Across Axis I disorders			
Age	–0.87	–3.27	.001
Sex	–0.04	–1.52	.13
Major depressive disorder	0.23	8.76	< .001
Bipolar I disorder	0.08	3.02	.01
PTSD	0.13	4.70	< .001
OCD	0.01	0.29	.78
Social phobia	0.07	2.65	.01
Specific phobia	0.06	2.07	.04
Panic disorder with agoraphobia	0.03	1.07	.29
Somatoform disorder[b]	0.05	2.03	.04
Impulse-control disorders (other than IED)[c]	0.03	1.17	.24
IED	0.10	3.95	< .001
Across Axis II disorders			
Age	–0.05	–1.26	.21
Sex	–0.15	–4.23	< .001
Cluster A personality disorder	0.08	1.93	.054
Cluster B personality disorder	0.20	5.26	< .001
Cluster C personality disorder	0.10	2.76	.006
Across Axis I and II disorders			
Age	–0.04	–1.15	.25
Sex	–0.12	–3.34	.001
Major depressive disorder	0.22	6.23	< .001
Bipolar I disorder	0.08	2.40	.02
PTSD	0.08	2.35	.02
Social phobia	0.06	1.54	.13
Specific phobia	0.10	2.79	.005
Somatoform disorder[b]	0.03	0.73	.47
IED	0.14	3.92	< .001
Cluster B personality disorder	0.18	5.06	< .001
Cluster C personality disorder	0.04	0.88	.38

[a]Abbreviations: IED = intermittent explosive disorder, OCD = obsessive-compulsive disorder, PTSD = posttraumatic stress disorder.
[b]Includes somatization disorder, undifferentiated somatoform disorder, pain disorder, hypochondriasis, and body dysmorphic disorder.
[c]Includes pathological gambling, trichotillomania, kleptomania, pyromania, and impulse-control disorders not otherwise specified, but does *not* include IED.

Table 5. Hierarchical Regression Analyses Predicting Aggressive Behavior Across Axis I Disorders, Axis II Disorders, and Both Axis I and Axis II Disorders[a]

Variable	β	t	p
Across Axis I disorders			
Age	–0.13	–4.75	< .001
Sex	–0.05	–1.94	.053
Major depressive disorder	0.09	3.24	.001
Bipolar I disorder	0.06	2.11	.04
PTSD	0.09	3.35	.001
OCD	0.02	0.59	.58
GAD	0.06	2.15	.03
Social phobia	0.08	–0.01	.78
Specific phobia	0.10	3.69	< .001
Panic disorder with agoraphobia	0.03	1.26	.21
Impulse-control disorders (other than IED)[b]	0.06	2.22	.03
IED	0.20	7.60	< .001
Somatoform disorder[c]	–0.04	1.56	.12
Drug abuse or dependence	0.07	2.52	.01
Across Axis II disorders			
Age	–0.10	–2.88	.004
Sex	–0.13	–3.64	< .001
Cluster A personality disorder	0.06	1.47	.14
Cluster B personality disorder	0.26	6.98	< .001
Cluster C personality disorder	0.08	2.17	.03
Across Axis I and II disorders			
Age	–0.09	–2.65	.008
Sex	–0.13	–3.67	< .001
Major depressive disorder	0.10	2.71	.007
Bipolar I disorder	0.09	2.52	.01
PTSD	0.04	1.04	.30
GAD	0.07	2.04	.04
Specific phobia	0.07	1.83	.07
Impulse-control disorders (other than IED)[b]	0.01	0.30	.76
IED	0.21	5.90	< .001
Drug abuse or dependence	0.08	2.36	.02
Cluster B personality disorder	0.24	6.61	< .001
Cluster C personality disorder	0.05	1.33	.19

[a]Abbreviations: GAD = generalized anxiety disorder, IED = intermittent explosive disorder, OCD = obsessive-compulsive disorder, PTSD = posttraumatic stress disorder.
[b]Includes pathological gambling, trichotillomania, kleptomania, pyromania, and impulse-control disorders not otherwise specified, but does *not* include IED.
[c]Includes somatization disorder, undifferentiated somatoform disorder, pain disorder, hypochondriasis, and body dysmorphic disorder.

20.5% of the variance (multiple $R = 0.47$, $p < .001$). PTSD, specific phobia, impulse-control disorders other than IED, and cluster C personality disorders were no longer significant in the model.

DISCUSSION

It is commonly held that depression and anxiety are the most prominent symptoms of individuals who present for outpatient psychiatric treatment. Our results suggest that anger should be included in this description as well. Just over one half of our sample reported currently experiencing at least moderate levels of subjective anger, and about one quarter reported experiencing severe levels of anger, which is comparable to the levels of depressed mood and psychic anxiety reported by our sample.

Why has anger received so much less attention in the field than depression and anxiety? Several possible reasons exist. First, anger is not a cardinal symptom of any diagnostic entity other than IED, and IED is generally considered a diagnosis of exclusion.[33] Thus, clinicians may not be screening for anger during their initial diagnostic interview. Second, because there are currently no medications that are U.S. Food and Drug Administration (FDA)–approved to treat anger and aggression, clinicians may be less inclined to evaluate or treat these symptoms. Third, questions regarding anger and aggression are not included in 2 of the most commonly administered outcome measures, the Hamilton Rating Scale for Depression and the Hamilton Rating Scale for Anxiety. Therefore, investigators using these instruments would be unable to examine the impact of treatment on levels of anger and aggression unless these symptoms were specifically targeted.

In addition to determining the overall levels of anger and aggression in our sample, we were also interested in evaluating which psychiatric disorders were most highly associated with these symptoms. Not surprisingly, those disorders for which anger or aggression is a diagnostic criterion, i.e., IED, PTSD, GAD, and cluster B personality disorders, were all found to be associated with increased rates of subjective anger or aggressive behavior. As hypothesized, anger and aggression were also prominent in patients diagnosed with bipolar disorder or MDD. To our surprise, specific phobia was found to independently predict subjective anger as well. Specific phobia is generally considered to be a relatively benign disorder and has rarely undergone systematic study. Specific phobia and anger are both cue-dependant reactions to external stimuli, and if these 2 phenomena are related, it is perhaps this element that accounts for their relationship.

Contrary to our hypotheses, panic disorder was not found to be independently associated with anger or aggression once we controlled for comorbid conditions. Although it has been suggested that the phenomenology of anger attacks and panic attacks are similar and therefore may covary in some individuals,[13] our results, consistent with those of the study by Tedlow et al.,[8] were unable to confirm this. It should be recalled, however, that we did not specifically screen for the presence of anger attacks, and our findings may not be generalizable to this syndrome. Although several studies have failed to find an association between anxiety and aggression,[5,6,18,19] our results suggest that PTSD and specific phobia independently contribute to the presence of subjective anger and that GAD independently contributes to the presence of aggressive behavior.

Our results regarding a lack of association between anger and aggression and alcohol abuse are consistent with those of several other studies that have evaluated psychiatric patients.[20–22] The discrepancy between these findings and those of epidemiologic studies, which have repeat-

edly found an association between alcohol abuse and aggressive behavior, may be a function of several factors: (1) individuals who are currently abusing alcohol may be poor historians or may minimize the severity of their emotions, (2) substance abusers who present for psychiatric treatment may differ from substance abusers in the community, and (3) epidemiologic studies assessing the relative risk associated with substance abuse generally compare substance abusers with individuals in the community. Our analysis assessed the relative risk of anger and aggression in substance abusers compared with non–substance abusing psychiatric patients. It may be that substance abuse confers a greater risk of aggression, but that this risk is comparable to that associated with psychiatric illness. Still, we did find that current drug abuse or dependence was associated with current aggressive behavior.

Although research focusing on aggressive behavior is much more extensive than that focusing on subjective anger, only a few studies have evaluated aggressive behavior in psychiatric outpatients, and none have examined aggression across both Axis I and Axis II disorders. In comparing our results with the findings from other studies, it should be recalled that almost all of the research to date on aggression has focused on behaviors that have an important impact on society such as spousal abuse, child abuse, and criminal behavior. In contrast to this approach, our study focused on aggression as a *symptom*, and therefore included such behaviors as shouting, throwing objects, and assaultiveness.

Several other limitations to the present study should be kept in mind. First, all of the results were drawn from a single site, and it is unclear how generalizable our results are, especially since indigent, psychotic, and substance abusing patients are all underrepresented at our practice. Second, sample sizes for some disorders, most notably bipolar disorder, manic or hypomanic, and schizophrenia, precluded us from including these disorders in the present study. Similarly, we were unable to evaluate the independent contributions of each individual personality disorder, and it is possible that differences within each personality disorder cluster exist that we would have been unable to elicit. Third, our assessment of anger and aggression relied on patient report, and no attempt was made to corroborate these reports with family or friends. Fourth, we did not evaluate anger and aggression as syndromes, but instead relied on single ratings as measures of both symptoms.

Notwithstanding these limitations, our results suggest that anger and aggression are quite common in psychiatric patients. Anger and aggression appear to be especially prominent in MDD, bipolar I disorder, IED, and cluster B personality disorders. In addition, PTSD and specific phobia were associated with increased levels of subjective anger, and GAD and drug abuse or dependence were associated with increased levels of aggressive behavior. In light of the fact that psychotherapy[16,34] and somatic therapy[14,35–38] have both been shown to be effective in reducing levels of anger and aggression, it is important that clinicians routinely screen for these symptoms.

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