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BRIEF REPORTS

THE RELATIONSHIP BETWEEN BORDERLINE PERSONALITY DISORDER AND ANXIETY DISORDERS

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Eleven "pure" borderlines, ten borderlines with depression, 16 "pure" depressives, and 31 normal subjects were compared on a number of standardized inventories of anxiety. While patient groups experienced more anxiety of all types than did normals, borderlines did not emerge as more anxious than other patient groups. Qualitative differences in the anxiety experienced by borderlines and nonborderlines are discussed.

While much attention has been given to the overlap between depression and borderline personality disorder (BPD) in recent years *(Gunderson & Elliott, 1985; Kroll & Ogata, 1987; Perry, 1985)*, there has been little systematic exploration of the relationship between BPD and anxiety disorders (AD). This is surprising, since severe and chronic anxiety, while not part of the *DSM-III (American Psychiatric Association, 1987)* criteria for BPD, has long been recognized by clinicians as an essential feature of this disorder *(Kernberg, 1975)*.

Psychodynamic descriptions of borderlines' anxiety have included phrases such as "pan-anxiety" *(Hoch & Polatin, 1949)*, fear of "fragmentation" *(Grotstein, 1984)* or dissolution of the ego *(Gediman, 1983)*, "organismic panic" *(Greenacre, 1941)*, and "annihilation anxiety" *(Mahler, 1971)*. Yet empirical studies of the BPD-AD overlap are few *(Grunhaus, King, Greden, & Flegel, 1985)*. Bell, Lycaki, Jones, Kelwala and Sitaram *(1983)* found that depressed borderlines had more symptoms of panic, phobia, and general anxiety than did depressed subjects without BPD. Others *(Koenigsberg, Kaplan, Gilmore, & Cooper, 1985; Mavissakalian & Hamann, 1987)* found significant overlap between AD and personality disorders in general, but not specifically with BPD. Perry *(1985)* found that borderlines with concurrent antisocial traits reported less anxiety than did borderlines without antisocial acting-out behavior. Pharmacologic studies of the efficacy of antipsychotic medication in BPD have revealed successful reduction of various borderline symptoms, including generalized and phobic anxiety as well as paranoia, transient psychotic-like experiences, and hostility *(Soloff, George, Nathan, Schulz, Ulrich, & Perel, 1986)*. While hostility is not generally thought of as an anxiety symptom, Snyder, Pitts, and Pokorny *(1985)* postulated that borderlines may use hostility

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as a defense against intense anxiety related to fear of separation and annihilation.

Thus, despite long-standing assumptions that borderlines are indeed anxious, the degree to which they manifest or experience anxiety symptoms remains unclear. This study attempts to clarify the types of anxiety symptoms found in borderlines and to explore further the qualitative differences in the anxiety experienced by borderlines and other diagnostic groups.

METHOD

Subjects

To evaluate differences between borderline and nonborderline anxiety, a group of borderline subjects was compared to two control groups—one composed of subjects with major depression (MDD), the other of "normals." A total of 37 subjects with BPD and/or MDD were drawn from two inpatient psychiatry units and an outpatient Personality Disorders Program at the University of Michigan. Subjects fell into three groups: *1)* "pure" borderlines, those without major depression; *2)* borderlines with major depression; and *3)* pure major depressives. Subjects were screened to exclude patients with ongoing medical problems, and all data were collected during a drug-free period. Subjects with chronic psychosis or obvious schizophrenic disorder were eliminated, but patients with brief or intermittent psychotic experiences were included. Potential borderline subjects met at least two criteria for *DSM-III* BPD on admission. Potential major depressive subjects (MDD) met at least three criteria for a *DSM-III* Major Depressive Episode.

Subjects who provided written consent were then administered a Diagnostic Interview for Borderlines (DIB) *(Gunderson, Kolb, & Austin, 1981)* during a drug-free period by a research team member. The research team is interdisciplinary, consisting of one psychiatrist, three to five psychologists, and one social worker. All DIBs and Research Diagnostic Criteria (RDC) *(Spitzer, Endicott, & Robbins, 1975)* were administered by one of the psychologists or the group psychiatrist. Interrater reliability on the DIB (Kappa = .78) by our group has been published elsewhere *(Cornell, Silk, Ludolph, & Lohr, 1983)*, and reliability has been maintained through periodic retraining and assessment. In addition, all subjects received an RDC diagnosis, made by consensus between the patient's primary therapist and a senior supervisor. Senior supervisors have achieved an average interrater reliability on the RDC diagnosis of depression of .92, weighted Kappa *(Cohen, 1968)* with a range of pair-wise reliability of .88 to .94. No one who administered the DIB to a given patient was involved in that patient's RDC diagnosis.

Borderline subjects were those who attained a DIB score of ≥ 7 and did not meet RDC criteria for MDD. Subjects who received a DIB score of ≥ 7 *and* met RDC criteria for MDD comprised the mixed borderline/major depression group (BPD/MDD). Nonborderline MDD controls scored ≤ 5 on the DIB and met RDC criteria for MDD. In order to minimize group overlap, it was decided in advance to exclude subjects scoring six on the DIB. On the Hamilton Depression Rating Scale *(Hamilton, 1960)*, the pure MDD group had an average score of 17.9, while the BPD/MDD group had an average score of 16.8 (nonsignificant difference).

The second control group consisted of 31 "normal" subjects who were recruited through radio and newspaper advertisements requesting volunteers "in good physical and emotional health who have never been in psychotherapy and are reasonably content with their lives." Respondents were screened by phone with a series of questions that tapped 11 major areas of functioning; these included occupational history, physical health, stability of interpersonal relationships, mood, childhood adjustment, and drug and alcohol use. Subjects who met criteria on these dimensions were invited to complete the MMPI and the Rosenberg Self-Esteem Scale *(Rosenberg, 1965)*. Subjects

whose scores fell between 25% and 75% on scales of the MMPI and answered eight of the ten questions on the Rosenberg in the direction of high self-esteem were admitted into the final sample.

The final sample consisted of 11 pure BPDs, 10 BPD/MDDs, 16 pure MDDs, and 31 normals. TABLE 1 shows a breakdown of subjects by age and diagnosis.

Procedure

A number of standardized inventories of anxiety were administered to subjects as part of a battery of biological and psychological tests. The tests were selected for assessment of group differences in anxiety symptoms that included psychological and somatic anxiety, panic attacks, phobias, and obsessive-compulsive symptoms.

SCL-90-R. The primary measure of anxiety was derived from the SCL-90-R, a 90-item self-report symptom scale that is widely used and well validated *(Derogatis & Cleary, 1977).* Psychopathology is assessed in nine symptom constructs: somatization, obsessive-compulsive, interpersonal sensitivity (or hypersensitivity to criticism), depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The global symptom severity index was used as a measure of overall psychopathology.

Anxiety Symptoms Questionnaire (ASQ). This is a 55-item inventory derived from the Autonomic Perception Questionnaire *(Mandler, Mandler, & Oviller, 1958)* that has been established as a reliable and valid measure of autonomic arousal.

Schedule for Affective Disorders and Schizophrenia (SADS). The particular sections of the SADS *(Spitzer & Endicott, 1975)* utilized for this study were those on presence and severity of panic attacks, somatic anxiety, psychic anxiety, phobias, and obsessive-compulsive symptoms. The SADS was administered by a research nurse trained in its administration

The group of 31 normal subjects was not administered the ASQ or the SADS.

Table 1

BREAKDOWN OF SUBJECTS BY AGE, GENDER, AND DIAGNOSIS

FACTOR	BPD ($N=11$)	BPD/MDD ($N=10$)	MDD ($N=16$)	NORMALS ($N=31$)
Age (Mean)	30.3	27.1	40.4	31.9
Sex				
Male	2	1	5	13
Female	9	9	11	18

BPD = Pure borderline group; BPD/MDD = Borderlines with major depression; MDD = Major depression.

RESULTS

Psychological anxiety. Psychological anxiety was measured by the SADS and SCL-90-R. The SADS psychic anxiety section explores the degree of fearfulness, apprehension, and worry experienced by subjects. The SCL-90-R anxiety factor measures degree of nervousness, fear, restlessness, and dread. The results indicated that all patient groups (BPD, BPD/MDD, and MDD) reported significantly more psychological anxiety on the SCL-90-R than did normal subjects (at the $<.001$ level). On this SCL-90-R anxiety factor, no differences emerged in the degree of psychological anxiety experienced by the three patient groups. Mean responses for the patient groups averaged between one and two on a five-point scale, indicating that patients rated their anxiety as between "a little bit" and "moderate." On the SADS, the MDD group experienced significantly more psychic anxiety than did the BPD/MDD group ($F=11.74$, $p<.01$), while the MDD group tended to experience more psychic anxiety than did the pure BPD group ($F=3.34$, $p<.08$). When the two BPD groups (i.e., those with and those without depression) were combined, the total BPD group experienced less psychic anxiety than did the MDD group ($F=11.74$, $p<.01$).

Somatic anxiety. Somatic anxiety was measured by the ASQ, the somatization factor of the SCL-90-R, and the somatic anxiety section of the SADS. On the SCL-

90-R, normals had less somatic anxiety than the three patient groups (all at the <.001 level). On the SADS, the BPD group and the BPD/MDD group had less somatic anxiety than the pure MDD group (both at the <.01 level). No difference emerged between the two borderline groups.

Panic attacks. No differences among the three patient groups on the existence/frequency of panic attacks were measured by the SADS. On average, all three patient groups had questionable panic attacks, or none. Since normal subjects were not administered the SADS, they were not rated on this item.

Phobias. On the SCL-90-R, all three patient groups reported a higher degree of phobic anxiety than the normal control group (at the <.001 level). On a 0 to 4-point scale, the MDD group obtained an average phobic anxiety score of .72, the BPD group a 1.0, the BPD/MDD group a 1.2, and the normal control group received 0.009. The three patient groups were not significantly different from one another.

Obsessive-compulsive symptoms. These were measured by the SCL-90-R obsessive-compulsive factor, and the SADS. On the SCL-90-R, normal subjects were significantly less obsessive-compulsive than were the three patient groups (at the <.001 level). No differences emerged on either the SADS or the SCL-90-R on the degree of obsessive-compulsive symptomatology among the three patient groups.

Other findings. A number of other significant findings emerged. On the SCL-90-R, all three patient groups received a higher Global Severity Index (GSI) score than the normals (at the <.001 level). On the SCL-90-R, the BPD group received a significantly higher score on the hostility dimension of the SCL-90-R than the MDD group ($F=21.38$, $p<.001$). The BPD/MDD group also scored higher on this dimension than the MDD group ($F=8.11$, $p<.01$). The three patient groups scored higher on this dimension than the normals (BPD vs normal $F=66.24$, $p<.001$; BPD/MDD vs normal $F=34.82$, $p<.001$; MDD vs normal $F=7.43$, $p<.01$).

On the SCL-90-R, the two borderline groups received significantly higher scores on the interpersonal sensitivity factor than the MDD group (BPD vs MDD $F=9.43$, $p<.01$; BPD/MDD vs MDD $F=11.78$, $p<.001$). Again, all three patient groups scored higher on this factor than the normal group (at the <.001 level).

On the psychoticism factor of the SCL-90-R, all three patient groups scored significantly higher than the normals (at the <.001 level). In addition, the BPD group scored higher than the MDD group ($F=6.99$, $p<.01$). No differences emerged between the two borderline groups or be-

Table 2

SCL-90-R SYMPTOM DIMENSIONS AND GSI MEANS FOR THE DIAGNOSTIC GROUPS AND NORMALS

FACTOR	BPD	BPD/MDD	MDD	BPD & BPD/MDD	NORMAL
Somatization	1.25	1.03	1.40	1.14	.24
Obsessive-Compulsive	1.79	1.76	1.89	1.78	.40
Interpersonal Sensitivity	1.95	2.07	1.15	2.01	.29
Depression	2.49	2.68	2.54	2.58	.33
Anxiety	1.78	1.62	1.79	1.70	.16
Hostility	1.80	1.40	.71	1.61	.18
Phobic Anxiety	1.00	1.19	.73	1.09	.009
Paranoia	1.92	1.33	.57	1.64	.18
Psychosis	1.26	.97	.73	1.12	.68
GSI	1.74	1.67	1.47	1.70	.23

BPD = Pure borderline group; MDD = Major depressives; BPD/MDD = Borderlines with major depression; (BPD & BPD/MDD) = 2 Borderline groups (with or without depression) combined.

Table 3

PAIRWISE COMPARISONS OF DIAGNOSTIC GROUPS MEANS ACROSS SYMPTOM DIMENSIONS OF THE SCL-90-R

SYMPTOM	BPD-BPD/MDD		BPD-MDD		BPD/MDD-MDD		(BPD & BPD/MDD)-MDD	
	X1-X2	F	X1-X2	F	X1-X2	F	X1-X2	F
Somatization	.22	.664	−.15	.335	−.37	1.949	−.26	1.299
Obsessive-Compulsive	.03	.932	−.10	.108	−.13	.176	−.11	.193
Interpersonal Sensitivity	−.12	.184	.80	9.430**	.92	11.78*	.86	14.55*
Depression	−.19	.427	−.05	.038	.14	.228	.04	.879
Anxiety	.16	.260	−.01	.106	−.17	.305	−.09	.111
Hostility	.40	2.64	1.09	21.38*	.69	8.110**	.90	18.84*
Phobic Anxiety	−.19	.473	.27	1.127	.46	3.016	.36	2.647
Paranoia	.59	7.338**	1.35	42.27*	.76	12.77*	1.07	31.98*
Psychosis	.29	1.958	.53	6.99**	.24	1.324	.39	4.969***
GSI	.07	.120	.27	1.912	.20	.988	.23	1.976

BPD = Pure borderline group; MDD = Major depressives; BPD/MDD = Borderlines with major depression; (BPD & BPD/MDD) = 2 Borderline groups (with or without depression) combined.
* $p = .001$; ** $p = .01$; *** $p = .05$.

tween the mixed BPD/MDD group and the pure MDD group.

On the paranoia dimension of the SCL-90-R, the BPD group scored higher than the BPD/MDD group ($F = 7.34$, $p < .01$) and higher than the MDD group ($F = 42.27$, $p < .001$). All three patient groups scored higher on paranoia than the normals (BPD vs normal $F = 98.70$, $p < .001$; BPD/MDD vs normal $F = 40.16$, $p < .001$; MDD vs normal $F = 5.19$, $p < .05$).

TABLE 2 shows the SCL-90-R symptom dimension and GSI means for the diagnostic groups and normals. TABLE 3 shows pairwise comparisons of diagnostic group means across symptom dimensions of the SCL-90-R.

DISCUSSION

While clinical writings on borderline psychopathology consistently refer to the prevalence of anxiety symptoms in borderlines, the current research found that borderlines reported no more anxiety than depressives on a number of standardized inventories. In fact, the study suggests that depressives may experience more psychological and somatic anxiety than borderlines. Phobic symptoms, including agoraphobia, social phobias, and simple phobias were uncommon among both our borderlines and depressives. Similarly, panic attacks were uncommon among both groups.

At first glance, these results seem to run counter to a shared intuitive clinical sense that borderlines are terribly anxious individuals and that deep, chronic anxiety is indeed a major aspect of their psychopathology. How then are we to understand this discrepancy? Three additional findings of the study may help to shed light on this question. Both pure borderlines and depressed borderlines were found to have significantly more hostility, interpersonal sensitivity, and paranoia on the SCL-90-R than the pure depressive group. The SCL-90-R hostility dimension includes items such as: "feeling easily annoyed or irritated," "temper outbursts," and "having urges to beat." The interpersonal sensitivity dimension includes such items as "feeling critical of others," and "feeling inferior," while the paranoia dimension includes items such as "feeling that most people cannot be trusted," and "feeling that people will take advantage of you if you let them." These three factors, which were elevated among borderlines, all involve affects within an interpersonal realm; one factor focuses on rage or disappointment with others, the second focuses on the belief that others are critical toward oneself, and the third focuses on

suspiciousness and mistrust of others. In contrast, the anxiety and the phobic anxiety factors of the SCL-90-R (where borderlines did not rate highly) describe feelings that are largely what the patient feels in isolation or out of the interpersonal context. For example, the anxiety dimension of the SCL-90-R includes items such as "trembling," "feeling tense," or "having frightening thoughts."

We propose that strong affects, including anxiety, come alive for borderlines within an interpersonal context. Thus, a borderline may not be able to say that he or she is tense or panicky, but will indeed be able to say that he or she is furious, disappointed, misunderstood, or criticized. Outside the interpersonal realm, affects may be experienced as a kind of nonspecific arousal or agitation with no name, almost like white noise. Perhaps only in a context of interpersonal interaction does this undifferentiated arousal gain definition.

Why should borderlines have such difficulty experiencing anxiety in isolation, away from a relationship? They often feel "unreal," "detached," or "lost" when alone. At these times the borderline may not be able to identify any particular affect, such as anxiety. What may emerge, instead, is a distortion in the sense of reality, or the loss of a sense of being real. While we might attribute this state to the anxiety that the borderline experiences in reaction to being alone, the symptoms themselves may not be the typical anxiety symptoms that have become the "codable" criteria of anxiety in psychiatric nomenclature, such as worry, dread, or a pounding heart.

Psychoanalytic theorists have long posited that predominantly preoedipal conflicts underlie borderline symptomatology. These preoedipal concerns, centered on both rage and separation fears, may be the arena of expression of the borderline's anxiety, and thus this anxiety may emerge predominantly in the context of interpersonal battles rather than in the standard ways outlined in *DSM-III-R* under "Anxiety Disorders."

Further investigations into borderlines' anxiety should explore the quality and not simply the quantity of the anxiety experienced. Standard inventories of anxiety, such as the SCL-90-R and the SADS, may not pick up on the quality of anxiety experienced by borderlines. The fact that borderlines do not score highly on these inventories should not automatically be taken to mean that they are not anxious. Perhaps our measures of anxiety are limited.

For the clinician, it may be useful to help borderlines delineate and define their own affect states, including anxiety. When a borderline patient experiences the primitive, diffuse arousal so characteristic of this group, the process of defining this arousal as a particular affect, e.g., anxiety, may allow the patient to experience the arousal as less all-encompassing, less terrifying, and ultimately less overwhelming to the ego.

REFERENCES

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders,* (3rd ed, rev.). Washington, DC: American Psychiatric Association.

Bell, J., Lycaki, H., Jones, D., Kelwala, S., & Sitaram, N. (1983). Effect of preexisting borderline personality disorder on clinical and EEG sleep correlates of depression. *Psychiatry Research, 9,* 115–123.

Cohen, J. (1968). Weighted kappa: Nominal scale agreement with provision for scaled disagreement or partial credit. *Psychological Bulletin, 70,* 213–220.

Cornell, D.G., Silk, K.R., Ludolph, P.S., & Lohr, N.E. (1983). Test-retest reliability of the diagnostic interview for borderlines. *Archives of General Psychiatry, 40,* 1307–1310.

Derogatis, L.R., & Cleary, P.A. (1977). Factorial invariance across gender for the primary symptom dimensions of the SCL-90. *British Journal of Social and Clinical Psychology, 16,* 347–356.

Gediman, H.K. (1983). Annihilation anxiety: The experience of deficit in neurotic compromise formation. *International Journal of Psychoanalysis, 64,* 59–70.

Greenacre, P. (1941). The predisposition to anxiety—Part II. *Psychoanalytic Quarterly, 10,* 610–638.

Grotstein, J.S. (1984). A proposed revision of the psychoanalytic concept of primitive mental states, part II. *Contemporary Psychoanalysis, 20*(1), 77–119.

Grunhaus, L., King, D., Greden, J.F., & Flegel, P. (1985). Depression and panic in patients with borderline personality disorder. *Biological Psychiatry, 20,* 688–692.

Gunderson, J.G., & Elliott, G.R. (1985). The interface between borderline personality and affective disorders. *American Journal of Psychiatry, 142,* 277–288.

Gunderson, J.G., Kolb, J.E., & Austin, Y. (1981). The diagnostic interview for borderline patients. *American Journal of Psychiatry, 138,* 896–903.

Hamilton, M. (1960). A rating scale for depression. *Journal of Neurology, Neurosurgery and Psychiatry, 23,* 56–62.

Hoch, P., & Polatin, P. (1949). Pseudoneurotic forms of schizophrenia. *Psychoanalytic Quarterly, 23,* 248–276.

Kernberg, O.F. (1975). *Borderline conditions and pathological narcissism.* New York: Aronson.

Koenigsberg, H.W., Kaplan, R.D., Gilmore, M.M., & Cooper, A.M. (1985). The relationship between syndrome and personality disorder in *DSM-III:* Experience with 2,462 patients. *American Journal of Psychiatry, 142,* 207–212.

Kroll, J., & Ogata, S. (1987). The relationship of borderline personality disorder to the affective disorders. *Psychiatric Developments, 2,* 105–128.

Mahler, M. (1971). A study of the separation-individuation process and its possible application to borderline phenomena in the psychoanalytic situation. *Psychoanalytic Study of the Child, 26,* 403–424.

Mandler, G., Mandler, J., & Oviller, E. (1958). Autonomic feedback: The perception of autonomic activity. *Journal of Abnormal and Social Psychology, 56,* 367–373.

Mavissakalian, M., & Hamann, M.S. (1987). *DSM-III* personality disorder in agoraphobia, II: Changes with treatment. *Comprehensive Psychiatry, 28,* 356–361.

Perry, J.C. (1985). Depression in borderline personality disorder: Lifetime prevalence at interview and longitudinal course of symptoms. *American Journal of Psychiatry, 142,* 15–21.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Snyder, S., Pitts, W.M., & Pokorny, A.D. (1985). Affective and behavioral features of *DSM-III* borderline personality disorder. *Psychopathology, 18,* 3–10.

Soloff, P.H., George, A., Nathan, R.S., Schulz, P.M. Ulrich, R.F., & Perel, J.M. (1986). Progress in pharmacotherapy of borderline disorders. *Archives of General Psychiatry, 43,* 691–697.

Spitzer, R.L., & Endicott, J. (1975). *Schedule for Affective Disorders and Schizophrenia (SADS).* New York: Biometric Research Division, New York State Psychiatric Institute.

Spitzer, R.L., Endicott, J., & Robbins, E. (1975). *Research Diagnostic Criteria (RDC) for a selected group of functional disorders* (2nd ed.). New York: Biometrics Research Division, New York State Psychiatric Institute.

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