

## Changes in Self-Destructiveness of Borderline Patients in Psychotherapy

### A Prospective Follow-Up

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Thirty-seven female inpatients with borderline personality disorder were followed prospectively for up to 5 years to assess changes in two forms of self-destructiveness: suicidal behavior/ideation, and self-harm behavior/ideation. It was found that suicidal behavior declined significantly at 1-, 2-, 3-, 4-, and 5-year follow-up; self-harm behavior showed trends but no significant decline over 5 years. Ideation (both suicidal ideation and self-harm) did not decline notably. Three alternate courses of self-harm behavior are identified: "fluctuating," "consistently low," and "steadily declining." The majority of patients fell in the fluctuating category. The fluctuating group showed higher baseline dysphoria than did the consistently low group, while the latter reported higher baseline drug use. Intercorrelations showed that self-harm behavior and suicidal behavior were not associated, nor were suicidal behavior and suicidal ideation. Clinical and research implications are discussed.

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Borderline patients present clinicians with several forms of persistent self-destructive behavior and ideation. Approximately 9% of hospitalized borderline patients die by suicide. This figure was arrived at by both Stone and Paris making careful 15-year follow-up with two different populations of borderline patients (Paris et al., 1987; Stone et al., 1987). McGlashan (1986) reported on an older sample of borderline patients, 3% of whom had committed suicide.

Stone and Paris both reported that the majority of suicides occurred within 5 years of the index hospitalization. In Paris et al.'s report (1987), the mean age at suicide was 32 years and the mean time from discharge was 4.1 years. In Stone's (1990) report, 80% of the patients who committed suicide had done so within 5 years of discharge. Stone found that the most lethal group of patients were female, alcoholic, and met criteria for both borderline personality disorder (BPD) and major affective disorder. After an average of 1 year of inpatient hospitalization, he estimated the 5-year sur-

vival rate for this subgroup at only 58%.

In 1983, Partison and Kahan published their classic report on the deliberate self-harm syndrome that distinguished self-mutilation from lethally motivated suicidal behavior. This syndrome was marked by onset in late adolescence, multiple episodes over many years, low lethality, and harm inflicted directly upon the body. This report identified a type of behavior that had been associated in earlier reports with: young age of onset, conflicts around aloneness, eating disorders (Pao, 1969), dissociative states (Grunebaum and Klerman, 1967; Pao, 1969), early history of physical and sexual trauma (Bach-Y-Rita, 1971; Green, 1978; Grunebaum and Klerman, 1967), and female patients who become easily addicted to drugs or alcohol (Graff and Malin, 1967). Gunderson (1984) observed this distinction between lethally motivated suicidal behavior and nonlethally motivated self-harm in BPD patients. In the current study, the terms suicidal behavior and nonsuicidal self-harm behavior are used.

Whether psychotherapy or psychopharmacological treatment diminishes the self-destructiveness of BPD patients is unknown. There are currently few controlled studies in which BPD patients with and without treatment have been compared. The four best-designed studies report the following: Linehan et al. (1991) found that BPD patients in a cognitive-behavioral treatment showed significantly fewer parasuicidal acts than a control group receiving treatment as usual in the community at four time points studied up to 1 year. The favorable results persisted at 1-year posttreatment follow-

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up (Linehan et al., 1993). Cowdry and Gardner (1988) showed a superior efficacy of carbamazepine to trifluoperazine, alprazolam, tranylcypromine, and placebo in reducing self-destructive acts in 16 female BPD patients in a 6-week crossover trial. Montgomery and Montgomery (1982) showed that flupenthixol was superior to mianserin and placebo in reducing parasuicidal acts in a personality disorder sample (mainly borderline and histrionic) over a 6-month follow-up period. Open trials suggest fluoxetine may be a useful medication in the treatment of BPD (Cornelius et al., 1991; Hull et al., 1993; Markovitz et al., 1991).

Before self-destructiveness in BPD can be meaningfully studied, researchers must know more about the course and the subtypes of self-destructive BPD patients. A useful example is offered by Hurt and Clarkin (1990), who, in a study of a large ( $N = 465$ ) sample of BPD patients, have identified an "impulsive" subgroup prone to self-mutilation that contrasts with an "identity disturbance" subgroup and an "affective" one.

The purpose of this study is to compare the change over time in subtypes of self-destructive behavior and ideation in a carefully diagnosed population of BPD patients. It is hoped that this data will both aid clinicians and offer stepping stones for further research into this problem. The data are drawn from a prospective, naturalistic study that tracks changes in BPD patients from the start of a new treatment.

## Methods

### *Sample*

The sample consists of 37 female BPD patients recruited by word-of-mouth referral and chart admission notes. For inclusion, subjects had to a) have just begun an individual psychotherapy (as part of their inpatient treatment), b) be between the ages of 17 and 35 years, and c) have been diagnosed as having BPD by a trained clinical rater using the Diagnostic Interview for Borderlines (DIB; Gunderson et al., 1981). Exclusion criteria were: a) history of or possible concurrent diagnosis of schizophrenia, bipolar illness, or organic mental disease, b) admission to the hospital primarily for detoxification, c) estimated IQ less than 80, d) complicating physical illness or handicap, or e) unable to commit to psychotherapy in the Boston area.

According to baseline demographics of the cohort, 65% were of Christian or Jewish religious background and 35% were classified as either "other" or no religious persuasion. Seventy-two percent were single, 17% were married, and 11% were separated or divorced. Forty-two percent of the fathers held executive or professional positions, 31% were in semiskilled, clerical or sales work, and 27% were administrators or managers. Eighty-four percent of the subjects had some college

or postgraduate education, and 29% had completed college. Seventy-eight percent reported half or greater financial dependence on their parents. Twenty-nine percent were living in a hospital or halfway house setting, 24% were living alone, 24% were living with friends, 12% were living with parents, and 9% were living with spouse and children.

Subjects had a range of previous psychotherapy of 0 to 163 months, with a mean duration of 32.4 months. The treatment context during follow-up initially included individual psychotherapy for all subjects. Most subjects were also in concurrent treatments, *i.e.*, pharmacotherapy, group, or family therapy. The majority of subjects were treated with two or three different classes of psychotropic medications during follow-up. These included benzodiazepines, neuroleptics, antidepressants, and mood-stabilizing drugs. Three patients reported terminating therapy and seven reported at least one therapist switch during the course of the follow-up. Forty-three percent of the cohort had not been rehospitalized at 6-month follow-up; during the subsequent follow-ups, the percentage of the cohort not rehospitalized during the prior 6 months was 52% at 1 year, 63% at 2 years, 50% at 3 and 4 years, and 36% at 5-year follow-up.

Given the longitudinal design of the project, not all subjects are included at each data point: there are 37 subjects at baseline, 32 at 6 months, 26 at 1 year, 22 at 2 years, 20 at 3 years, 17 at 4 years, and 12 at 5 years. Not all subjects had progressed to the 5-year mark at the time of the analysis. An earlier report has documented the rates of attrition from the study and the associated reasons (Gunderson et al., 1989).

### *Assessment Procedures*

In the current study, six variables related to self-destructiveness were drawn from the Suicide Behaviors Questionnaire (SBQ; Linehan, 1981) and the DIB (see Appendix). If a patient reported either a suicide or self-harm action, a more detailed set of inquiries was made regarding method, number of attempts, severity of injury, and potential lethality of the attempt. Data were obtained by one of five clinical interviewers (psychiatrists or psychologists) trained in the use of the instruments by the senior investigator (J. G. G.). In some cases, clinical interviewers were not blind to previous data by the patient as they had interviewed the same patient at earlier assessment points. The SBQ and DIB data were coded dichotomously as either "yes" or "no." For SBQ thoughts, "never" was recorded as no and "rarely or more frequently" was recorded as yes. For DIB acts, "probable" and "definite" were recorded as yes (see Appendix). In addition, items from the DIB, SBQ, BPOQ, and Global Assessment of Function Scale

(GAS) were used to assess baseline predictors of change.

### Analyses

Analyses included descriptive statistics, Wilcoxon matched-pairs signed-rank test, repeated-measures analysis of variance (ANOVA), and correlations. To study changes in self-destructiveness over time, Wilcoxon tests were run comparing the baseline data to each subsequent time point (6 months, 1 year, 2 years, 3 years, 4 years, and 5 years), using those subjects who were assessed both at baseline and the subsequent time points. Since some subjects are missing data, the *N*s reported in Figures 1 and 2 may vary by one or two subjects. A repeated-measures ANOVA was also run on the SBQ and DIB variables in an attempt to use the same subjects at each time point: a subsample of 19 subjects was compared at baseline versus "early-in-treatment" (6-month and/or 1-year data) versus "late-in-treatment" (2-, 3-, and 4-year data). To explore the relationship between the study variables, correlations were run. Descriptive statistics were used to identify alternate courses of self-destructive behavior among 28 patients with at least four time points of data (which were then tested with chi-squares) and to study degree of lethality of suicidal behaviors.

Since the self-harm course revealed three distinct subgroups of patients, we attempted to identify baseline predictors of these subgroups. Two of the raters (A. N. S. and J. G. G.), based on their reviews of the literature and their clinical experience, identified features they thought were apt to predict future self-harm. This resulted in selecting the best corresponding 17 items out of the 172 items in the baseline assessments. One-way ANOVAs of the 17 items at baseline were used to compare the three patterns of self-harm course.

### Results

The first major question concerned change in the subtypes of self-destructiveness over time, *i.e.*, suicidal behavior or (nonsuicidal) self-harm behavior. Results show a clear finding that suicidal behavior declined from baseline to subsequent time points up to 5 years on both the SBQ and the DIB (all time points after 6 months are significant; see Figure 1). Self-harm behavior data were less consistent in that self-harm behavior did not decline significantly from baseline on the SBQ and on the DIB only at 3 years, though trends were apparent with both (see Figure 2). Finally, both suicidal ideation and self-harm ideation showed virtually no change over time. The exception was that suicidal ideation at 5 years had declined significantly from baseline ( $z = 2.02$ ,  $p = .04$ ,  $N = 12$ ). Eighty-six percent of the patients were thinking of suicide at baseline and 50%

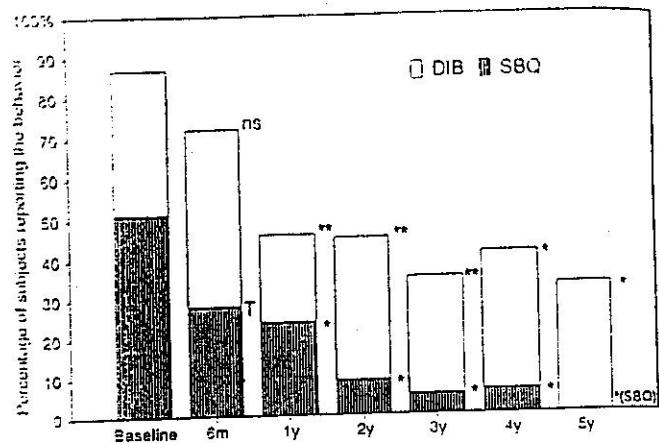


FIG. 1. Suicidal behavior. All analyses are Wilcoxon tests (two-tailed  $p$ ) comparing baseline to each subsequent time point on each measure. ns, Not significant; T, trend,  $p \leq .10$ ; \* $p \leq .05$ ; \*\* $p \leq .005$ . Baseline: DIB,  $N = 37$ , SBQ,  $N = 37$ ; 6 months: DIB,  $N = 32$ , SBQ,  $N = 31$ ; 1 year: DIB,  $N = 26$ , SBQ,  $N = 25$ ; 2 years: DIB,  $N = 22$ , SBQ,  $N = 22$ ; 3 years: DIB,  $N = 20$ , SBQ,  $N = 19$ ; 4 years: DIB,  $N = 17$ , SBQ,  $N = 17$ ; 5 years: DIB,  $N = 12$ , SBQ,  $N = 12$ .

of the patients had attempted suicide at baseline. Throughout the 2- to 5-year follow-up period, more than 90% of the patients were reporting suicidal ideation without making an attempt.

In the repeated-measures ANOVA of the six self-destructiveness variables, only the DIB variables were significant (suicidal behavior,  $F[2,36] = 8.42$ ,  $p = .00$ ; self-harm behavior,  $F[2,36] = 3.88$ ,  $p = .03$ ). Polynomial contrasts reflect significant linear trends, indicating decrease over time (suicidal behavior,  $F[1,18] = 18.56$ ,  $p = .00$ ; self-harm behavior,  $F[1,18] = 6.09$ ,  $p = .00$ ).

A second major question concerned subgroups within the BPD sample. Based on frequency of self-destructive behaviors over time, we differentiated three

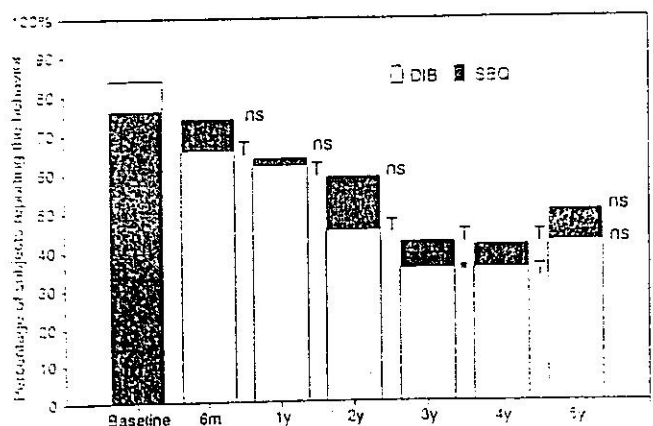


FIG. 2. Self-harm behavior. All analyses are Wilcoxon tests (two-tailed  $p$ ) comparing baseline to each subsequent time point on each measure. ns, Not significant; T, trend,  $p \leq .10$ ; \* $p \leq .05$ ; \*\* $p \leq .005$ . Baseline: DIB,  $N = 37$ , SBQ,  $N = 37$ ; 6 months: DIB,  $N = 32$ , SBQ,  $N = 31$ ; 1 year: DIB,  $N = 26$ , SBQ,  $N = 25$ ; 2 years: DIB,  $N = 22$ , SBQ,  $N = 22$ ; 3 years: DIB,  $N = 20$ , SBQ,  $N = 19$ ; 4 years: DIB,  $N = 17$ , SBQ,  $N = 17$ ; 5 years: DIB,  $N = 12$ , SBQ,  $N = 12$ .

subtypes of course: "fluctuating," "consistently low," and "steadily declining." For suicidal behaviors, a chi-square analysis showed no significant difference in the number of patients in each category (fluctuating,  $N = 8$ ; consistently low [no suicide attempts],  $N = 13$ ; and steadily declining,  $N = 7$ ,  $\chi^2 = 5.64$ ,  $df = 2$ ,  $p = .06$ ). Yet for self-harm behavior, the chi-square was significant ( $\chi^2 = 6.89$ ,  $df = 2$ ,  $p = .032$ ), with the most frequent course being fluctuating ( $N = 15$ ) rather than steadily declining ( $N = 8$ ) or consistently low ( $N = 4$ ). As an example of such a fluctuating course, one patient reported zero self-harm acts at baseline, 30 at 6 months, 11 at 1 year, 2 at 2 years, 15 at 3 years, and 1 at 4 years.

The one-way ANOVA of baseline predictors of fluctuating course of self-harm showed that high dysphoric affect (dysphoria was defined as emptiness, loneliness, boredom, or anhedonia) score and low recent drug use score differentiated the fluctuating course of self-harm from the consistently low pattern. High depersonalization and isolation scores showed trends toward differentiating the fluctuating pattern from the consistently low pattern of self-harm (see Table 1).

A third question concerned the relationship between study variables as assessed by intercorrelations. Suicidal behavior and self-harm behavior appear to be independent in that they were correlated on the SBQ only at baseline ( $r = .46$ ,  $p \leq .01$ ,  $N = 37$ ) and on the DIB only at 6 months ( $r = .46$ ,  $p \leq .01$ ,  $N = 31$ ) and 3 years ( $r = .58$ ,  $p \leq .01$ ,  $N = 20$ ). Suicidal behavior and suicidal ideation were significantly correlated only at baseline on the SBQ ( $r = .41$ ,  $p \leq .01$ ,  $N = 37$ ) and at 6 months on the DIB ( $r = .50$ ,  $p \leq .01$ ,  $N = 31$ ). With self-harm, there was a persistent relationship between ideation and behavior. Self-harm behavior was related to self-harm ideation on the SBQ at baseline ( $r = .62$ ,  $p < .001$ ,  $N = 37$ ), 6 months ( $r = .85$ ,  $p \leq .001$ ), 1 year ( $r = .75$ ;  $p < .001$ ,  $N = 26$ ), 4 years ( $r = .57$ ,  $p < .01$ ,  $N = 18$ ), and 5 years ( $r = .86$ ,  $p < .001$ ,  $N = 13$ ). Self-harm behavior was related to self-harm ideation on the DIB at 6 months ( $r = .79$ ,  $p < .001$ ,  $N = 31$ ), 1 year ( $r = .75$ ,  $p < .001$ ,  $N = 26$ ), 2 years ( $r = .57$ ,  $p < .01$ ,  $N = 22$ ), 3 years ( $r = .52$ ,  $p < .01$ ,  $N = 20$ ), and 5 years ( $r = .73$ ,  $p < .01$ ,  $N = 13$ ).

In addition, suicidal ideation correlated with self-harm ideation and self-harm behavior at 6 months and 1 year, but showed no further correlation with these variables at 2-, 3-, 4-, and 5-year follow-ups. Specifically, suicidal ideation correlated with self-harm ideation at 6 months ( $r = .46$ ,  $p < .01$ ,  $N = 31$ ) and 1 year ( $r = .47$ ,  $p < .01$ ,  $N = 26$ ). Suicidal ideation correlated with self-harm behavior on the DIB at 6 months ( $r = .41$ ,  $p < .01$ ,  $N = 31$ ) and 1 year ( $r = .59$ ,  $p < .001$ ,  $N = 26$ ). Suicidal ideation correlated with self-harm behavior on the SBQ only at 6 months ( $r = .50$ ,  $p < .01$ ,  $N = 31$ ).

The relationship between the two study measures (SBQ and DIB) was also addressed. For suicidal behavior, there was no significant correlation at any point; however, for self-harm, the measures were correlated at six points (baseline:  $r = .61$ ,  $p < .001$ ,  $N = 37$ ; 6 months:  $r = .93$ ,  $p < .001$ ,  $N = 31$ ; 1 year:  $r = .85$ ,  $p < .001$ ,  $N = 26$ ; 2 years:  $r = .76$ ,  $p < .001$ ,  $N = 22$ ; 4 years:  $r = .65$ ,  $p < .01$ ,  $N = 18$ ; 5 years:  $r = .85$ ,  $p < .001$ ,  $N = 13$ ).

Finally, dropouts from the study ( $N = 9$ ) were compared with nondropouts ( $N = 28$ ) at baseline to test whether there were pretreatment differences in severity between the two groups. Chi-square analyses on the SBQ and DIB self-harm behavior and suicidal behavior variables showed no significant difference between the two groups at baseline.

## Discussion

In this study, we found that over a 6-month to 5-year follow-up period: a) BPD patients show a significant decline in suicidal behavior. b) They show only a modest decline in self-harm behavior. c) The course of their self-destructiveness could be tentatively separated into three types (consistently low, fluctuating, or steadily declining), with suicidal behavior evenly divided among the three subgroups and self-harm behavior largely falling into the fluctuating category. d) High dysphoric affect and lower recent drug use at baseline predicted a fluctuating course of self-harm rather than consistently low self-harm.

These results should be understood with appreciation for our study's strengths and limitations. Our

TABLE 1  
Baseline Predictors of Course of Self-Harm

| Item                                | Subgroup           | Means | N  | F    | df     | p   |
|-------------------------------------|--------------------|-------|----|------|--------|-----|
| Dysphoric affect                    | Fluctuating course | 2.0   | 18 | 4.42 | 2 + 23 | .02 |
|                                     | Consistently low   | 1.67  | 6  |      |        |     |
| Frequent drug use during past month | Fluctuating course | 1.18  | 17 | 3.38 | 2 + 22 | .05 |
|                                     | Consistently low   | 2.17  | 6  |      |        |     |
| Depersonalization                   | Fluctuating course | 1.22  | 18 | 3.22 | 2 + 23 | .06 |
|                                     | Consistently low   | .17   | 6  |      |        |     |
| Social isolation                    | Fluctuating course | .50   | 12 | 2.04 | 2 + 23 | .17 |
|                                     | Consistently low   | .33   | 6  |      |        |     |

strengths are that this is the first prospective study using trained clinical interviewers to follow rigorously diagnosed patients for such a length of time (up to 5 years in treatment) and the first study to include measurement of ideation as well as behavior. Yet, these results are also limited by methodological shortcomings of the study: the lack of a control group (which means that we cannot know whether the results observed are due to being in psychotherapy, medication effects, or hospitalizations, or whether they would have happened due simply to the passage of time), the use of verbal accounts by patients of their own behavior (albeit as recorded by experienced clinical interviewers), and the problem posed by significant missing data points (*i.e.*, not all subjects were measured at each follow-up time interval). This last issue is particularly worrisome.

On comparison of baseline characteristics of the study dropouts and remainers, we could detect no differences. This suggests that the study did not suffer from a sample selection bias whereby the more severely impaired patients dropped out while healthier patients remained. However, since the dropout rate is high, we cannot comment on the outcome of our entire baseline sample. This limits the generalizability of our findings in unclear ways.

The results of decline in suicidal but not self-harm behavior, if validated by future research, may have interesting implications. For example, it would be useful to provide clinicians with a "timetable" of expectable changes in BPD patients, *e.g.*, that suicidal behaviors should likely decline by 1 year into treatment for most patients and should continue to decline steadily over time. In this regard, it is noteworthy that Van der Kolk et al. (1991) report an almost identical decline in a sample of BPD patients from a public sector setting in which 50% at baseline reported suicide attempts whereas only 14% reported suicide attempts at 4-year follow-up. (Our data show 50% at baseline and 6% at 4-year follow-up.) If suicidal acts are not declining, we believe that consultation about the efficacy of the treatment is often indicated (Gunderson et al., 1993). Of course, it must be emphasized that patients in this study had a substantial amount (mean, 32 months) of previous therapy, which may have influenced their response to their current intervening treatment. We are also reporting on a sample of patients who remained in the study, not on the entire cohort.

Also of interest is the hierarchy of symptom change: the most extreme behavior (suicidal behavior) changes most rapidly and consistently, while the next level of symptom severity (self-mutilation as measured by the DIB) shows a trend toward decline; self-harm behavior (as measured by the SBQ, which on our report included self-mutilation with abuse of medication, bingeing, and

purging) shows a less consistent course of change. The most benign symptom (ideation) changes most slowly, if at all. Suicidal behavior and self-harm behavior never correlated on the SBQ and correlated only twice (at 6 months and 3 years) on the DIB. These data add further support to the body of literature (Dingman and McGlashan 1988; Gardner and Cowdry, 1985; Linehan, 1981; Morgan, 1979; Pattison and Kahan, 1983; Ross and McKay, 1979) that distinguishes suicidal behavior from deliberate self-harm. In our BPD patients, suicide acts were much less frequent and changed more rapidly and consistently than did deliberate self-harm.

Our results on subgroups of self-destructiveness are consistent with those of Hurt and Clarkin (1990) in suggesting that some patients appear to show greater self-destructiveness than others (*cf.*, the "impulsive" subgroup they identified). The results suggest that patients with fluctuating course might be considered the most treatment resistant in that their self-harm remained erratic.

Dysphoric affect was the best baseline predictor of the fluctuating self-harm course. The fluctuating course patients also used illegal drugs less frequently at baseline. Self-harm behavior itself may be an attempt to modulate dysphoric affect (Van der Kolk et al., 1989). If so, those patients who were modulating dysphoric affect without frequent drug use at baseline actually showed a more refractory course of self-harm. Russ et al.'s (1993) report shows that those BPD patients who do not experience pain during self-mutilation have more severe depressive, anxiety, impulsive, and dissociative symptoms and trauma histories. In clinical work, one might identify these subgroups at baseline and develop interventions aimed at relieving the dysphoric affect. Future clinical trials might target dysphoric affect and note the subgroups of self-mutilators with respect to drug abuse and the presence or absence of analgesia to pain during self-mutilation. The non-drug-abusers may actually be more difficult to treat with respect to self-mutilation. These data also lend support to our clinical experience that there are a group of BPD patients with trauma histories who abuse alcohol and other drugs for a number of years, but whose florid self-mutilation symptoms do not emerge until they become abstinent. It may be worth identifying these BPD patients early in treatment so that this difficult problem is anticipated. Many drug abuse programs are stunned by the florid self-mutilation that occurs once these patients become abstinent.

Also, it is notable that the majority of BPD patients showed a marked decline in suicidal behavior, whereas most did show persistent self-harm behavior. These findings might have implications for mental health resource allocation (*e.g.*, the diminution of suicide attempts may be a more realistic goal than the prevention

of self-harm for many of these patients).

Finally, our results on self-destructive ideation suggest that clinicians should recognize that self-harm ideation was significantly associated with self-harm action. On the other hand, there was a significant divergence between suicidal thought and action which widened as patients progressed through the study.

Future research might attend to a variety of issues raised here. For example, is the high dysphoric affect a reproducible predictor of fluctuating course of self-harm? If so, might targeting this symptom with a mood stabilizer or mood stabilizer and antidepressant predict better outcome over a 2- to 5-year follow-up period? What other baseline "markers" (whether biological, demographic, or historical) might predict classification into the different self-destructiveness subgroups observed here? Russ et al. (1992) has shown different symptomatic responses to the cold pressor test based on whether the BPD patient experiences pain during self-mutilation. Van der Kolk et al. (1991) has shown childhood neglect to be a predictor of persistent self-harm, whereas Green (1978) showed physical abuse but not neglect to predict a pattern of self-harm behavior. Future studies might clarify these predictors. We can also wonder about the causes of the changes observed in self-destructiveness: were these due to an alliance with therapist, the effect of particular psychotherapy techniques (e.g., interpretations or the instillation of hope), maturational processes, medication or drug effects, or simply the natural periodicity of self-destructive impulses in BPD patients? We hope that this naturalistic study provides a basis for more refined efforts designed to understand and treat the painful self-destructiveness of BPD patients.

### Conclusions

This prospective 1- to 5-year follow-up using structured interviews of 37 female BPD patients reveals: a) BPD patients who continued in the study reported a clear and significant decline in suicidal behavior. b) They showed only slight evidence of decline in self-harm behavior. c) The course of their self-harm could be tentatively separated into three types: fluctuating, consistently low, and steadily declining, of which the fluctuating category was predominant. d) High dysphoric affect and low recent drug use at baseline predicted a fluctuating course of self-harm rather than a consistently low pattern. e) Intercorrelations support the concept that self-harm behavior and suicidal behavior are independent variables, as are suicidal behavior and suicidal ideation. f) Self-harm behavior and self-harm ideation are correlated throughout follow-up. g) Suicidal ideation correlates with self-harm ideation and self-harm in the first year of follow-up but not later.

### Appendix: Interview Items

#### Suicidal Behavior

##### Figure 1. SBQ Suicide Acts

In the past 6 months, have you intentionally harmed yourself in a way which at the time you or someone else considered a *suicide attempt*? \_\_\_ No \_\_\_ Yes.  
If yes, how many times?

##### Figure 1. DIB Manipulative Suicide Attempt

The patient has made a manipulative suicide threat or effort, defined as any suicide attempts or gesture made in circumstances in which someone probably would know of the effort, *i.e.*, seems primarily designed to effect a saving response from someone. This can include wrist slashing.

#### Self-Harm Behavior

##### Figure 2. SBQ Self-Harm Acts

In the past 6 months, have you intentionally *harmed* yourself in a way which at the time was *NOT* considered by you or anyone else a suicide attempt? \_\_\_ No \_\_\_ Yes.  
If yes, how many times?

##### Figure 2. DIB Self-Mutilation

The patient has slashed his/her wrist or otherwise self-mutilated himself/herself.

#### Self-Destructive Thoughts

##### SBQ Suicide Thoughts

In the past 6 months, how often have you thought about *killing* yourself? \_\_\_ Never \_\_\_ Rarely (once or twice) \_\_\_ Sometimes \_\_\_ Often (at least once a week) \_\_\_ Very Often (almost daily)

##### Self-Harm Thoughts

In the past 6 months, how often have you thought about *hurting*, but not killing yourself? \_\_\_ Never \_\_\_ Rarely (once or twice) \_\_\_ Sometimes \_\_\_ Often (at least once a week) \_\_\_ Very Often (almost daily)

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