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A Clinical Trial of a Psychoeducation Group Intervention for Patients With Borderline Personality Disorder

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ABSTRACT

Objective: The objective of this study was to assess the impact of a 6-session psychoeducational group (PEG) intervention for borderline personality disorder (BPD) in an underserved community-based outpatient setting.

Methods: The study was conducted between July 2015 and January 2017. Of 96 outpatients who met *DSM-IV* criteria for BPD, the first 48 received the experimental treatment, whereas the next 48 were assigned to a wait list. All received non-intensive treatment as usual. The primary outcome measure, the Zanarini Rating Scale for *DSM-IV* Borderline Personality Disorder (ZAN-BPD), was administered at baseline, at the end of treatment, and 2 months after the end of treatment.

Results: The PEG intervention was associated with a significant improvement on all sectors of BPD ($P < .001$). Improvements were greater for the PEG on all sectors except impulsivity. Benefits remained stable during 2-month follow-up. The PEG intervention had a large effect size (Cohen $d = -1.16$), whereas the wait list effect size was small (Cohen $d = -0.18$). The between-arms effect size was 0.80 after treatment and 0.90 at follow-up. With full response defined as a decrease of $\geq 50\%$ from baseline in ZAN-BPD total score, 22 patients (46%) in the psychoeducation group and 3 (6%) in the wait list group were considered full responders.

Conclusions: This study shows that a PEG intervention can be an effective treatment for patients with BPD. The overall cost benefits of group interventions and the the applicability of a PEG intervention to underserved patients demonstrate its potential to address significant public health needs.

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Borderline personality disorder (BPD) has shifted from being considered an intractable condition to a disorder with a good prognosis for recovery. Research data show that BPD's course is characterized by high rates of sustained remission and low rates of recurrence.^{1,2} Perspectives on the treatment of BPD have also changed dramatically due to the development of multiple effective evidence-based therapies.³ Most evidence-based treatments for BPD, though, are typically intensive and require extensive training and supervision and rigorous monitoring of adherence to standards. These restrictions have handicapped their broad dissemination across standard psychiatric services. In this context, the emergence of less intensive and easier-to-learn generalist therapies that have proven to be nearly as effective as specialized BPD treatments offer models that are better suited to meet public health needs.^{4,5}

Psychoeducation has proven to be an effective, cost-effective type of intervention for many Axis I disorders.^{6–13} Despite this record of effectiveness, and that psychoeducation for patients with BPD was first proposed in the 1990s,^{14,15} it has received only limited clinical and research attention. To date, the role of psychoeducation in managing BPD has been the subject of 2 studies, both by Zanarini and colleagues.^{16,17} In the first study,¹⁶ 50 young women (aged 18–30 years) were randomly allocated to either a psychoeducation workshop ($n = 30$) or a wait list ($n = 20$). Those that received the psychoeducation did significantly better on reducing some aspects of BPD psychopathology as measured by the Zanarini Rating Scale for *DSM-IV* Borderline Personality Disorder (ZAN-BPD), while they showed no differences in ZAN-BPD total score. However, looking at the whole group of patients, the researchers found a decrease in the mean ZAN-BPD total score from about 11.5 to about 6.5. At baseline, illness of subjects included in the study was on average in the moderate range and declined over time into the mild range. In the second study,¹⁷ 80 young women (aged 18–30 years) were randomly assigned to either a web-based psychoeducation intervention ($n = 40$) or a control group with no psychoeducation ($n = 40$). Those receiving the web-based psychoeducation did significantly better at 3-month follow-up, showing a significantly greater decline in impulsivity and an increase in psychosocial functioning than those in the control group. One-year follow-up showed that the psychoeducation group did significantly better in terms of BPD in all 4 of its component sectors. Zanarini and colleagues' pioneering research, which has documented the value of psychoeducation workshops, provides the backdrop against which the current project was done.

This article reports on a study that assessed the efficacy of a more sustained 6-session psychoeducation group (PEG) intervention, which was provided to clinical samples of BPD patients within an underserved, community-based outpatient setting. The

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Clinical Points

- The gold standard treatments for borderline personality disorder (BPD) are often poorly available; psychoeducation can be a useful, economical, and easy-to-implement treatment alternative.
- Psychoeducation can be a useful treatment for BPD patients with moderate-to-severe psychopathology.

psychoeducation is based on Good Psychiatric Management (GPM), a user-friendly generalist model for treating BPD.^{18,19}

METHODS

Sample Selection

One hundred two subjects were recruited in an underserved outpatient psychiatry service within an 18-month time frame (July 2015–January 2017). They were referred to the study at the Fano Outpatients' Services (Fano, Italy) by their community-based evaluating psychiatrists, who were required to have made a clinical diagnosis of BPD based on *DSM-IV* criteria. Indeed, subjects were asked the BPD questions listed in the Structured Interview for *DSM-IV* Personality Disorders (SCID-II).²⁰ On arrival at the Fano clinic, subjects filled a confirmatory self-report diagnostic screening questionnaire—the McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD).²¹ Only 1 patient failed to get the confirmatory MSI-BPD diagnosis. An additional 5 patients who evidenced mental impairment or organic brain disorder, current or lifetime diagnoses of schizophrenia or schizoaffective disorder, or a current diagnosis of substance dependence (excluding nicotine dependence) were excluded.

The remaining 96 subjects who met inclusion criteria were enrolled in the study: the first 48 (ie, the PEG) received the experimental treatment, whereas the next 48 who were assigned to a wait list served as a control group; they participated in PEGs at the study's completion. The control group underwent clinical assessment in the same time points (baseline, after 6 weeks from the baseline, after 8 weeks from the previous visit) as the PEG. After the completion of baseline assessments, all enrolled subjects met individually with the principal investigator (M.E.R.), who informed them about the BPD diagnosis.

Treatment as usual in the participating clinic consisted of once-monthly medical management. None of the participants were receiving BPD-specific treatments or other group therapies. All patients had the study procedures explained to them and then provided signed informed consent. The study's protocol had been reviewed and approved by the chair of the Department of Psychiatry at Fano Outpatients' Services.

Assessments

After signing an informed consent form, all participants were assessed by clinician raters, who were experienced with BPD using the ZAN-BPD.²¹ Criteria are divided into

4 sectors: affective, cognitive, impulsive, and interpersonal. The ZAN-BPD was administered before the intervention, at the end of the intervention (6 weeks), and 8 weeks post-intervention. Raters collected additional information on demographics (age, sex, education, and marital status), history of psychiatric disease, and medications.

All clinician raters received training from the lead investigator (M.E.R., an officially credentialed GPM trainer). Training used up to 20 video recordings (role-played by raters) that were scored independently, then discussed to establish reliability (though reliability ratings were not calculated). Raters were uninvolved in the PEG intervention but were not blind to the treatment procedures.

The 8-week follow-up assessment was associated with a monthly medical management session in which, for the first time, individualized attention was given to patients' questions about further aftercare and about more personal issues (such as "Am I bad?" or "Who's to blame?"). Patients were uniformly compliant with attending these appointments.

Intervention

The PEG intervention was developed from GPM.^{18,19} GPM is a generalist model that emphasizes the role of psychoeducation in facilitating treatment alliance and establishing realistic expectations about course and treatment. The intervention began with each patient's group leader reviewing the patient's diagnosis and discussing what to expect in the forthcoming groups. The PEG intervention was structured on a closed-group format of 6 weekly sessions each lasting 90 minutes. The first hour of each session involved the presentation and discussion of didactic material derived from the GPM handbook¹⁹ and from GPM workshops^{22,23} based on each of the 6 specific topics with time for questions. Patients sat in a semicircle facing a board. The rest of the time was devoted to feedback and mutual support. Socializing and discussion of lighter topics was encouraged at the start and close of each meeting to keep the group comfortably informal. Groups included 8 participants to ensure sufficient time to address individual concerns. Subjects were divided in 2 subgroups, ages 18–30 years and ages 30–45 years, to provide relatively age-homogenous groups to facilitate identification and sharing. A leader and a coleader (both professionals and both of whom had received training in GPM), led the groups.

As shown in Table 1, the 6 topics identified by GPM for psychoeducation were (1) diagnosis of BPD and symptoms, (2) origins of BPD, (3) comorbid disorders, (4) course, (5) treatment, and (6) medications. Information was delivered in a validating, empathic, and nontechnical way to make it clearly understandable but also to ease the feelings of guilt or shame and convey a sense of hope. Participants were provided didactic materials to be read at home. They were encouraged to share their lesson materials with family members, friends, and significant others to provide them with a source of psychoeducation that would thereby help create a wider, more informal social support network.

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Table 1. Psychoeducation: A Session-by-Session Description

Theme (with source material ^a)	General Contents
Session 1: Diagnosis (chapters 2, 3; video 2)	DSM-5 criteria, interpersonal hypersensitivity, developmental perspective of the disorder
Session 2: Origins (chapters 2, 3; video 1, 9)	Borderline personality disorder is associated with both a genetic disposition and adverse environmental factors; no single factor accounts for the disorder Brain disorder: genetics (significantly heritable), neurobiology (hyperreactive amygdala and underactive prefrontal cortex, abnormal neurohormones) Validating and invalidating environment. Hypersensitive child challenges parenting
Session 3: Comorbid disorders (chapter 6; case 5; video 7)	Description of associated disorders (eg depression, substance abuse) and what to treat first
Session 4: Course (chapters 3, 4; video 1)	Results from the longitudinal studies: symptom remission and relapse, suicide risk, failures of social adaptation; overall hopefulness, importance of work over love
Session 5: Treatment (chapters 1, 4, 5; case 4; appendix A)	Many forms of evidence-based treatments. No need for intensive treatment for most patients. Use and misuse of hospitalization. Importance of active collaboration. Patients as agents in their own recovery
Session 6: Medications (chapters 6, 7; video 7)	Limited effects of pharmacotherapy; dangers of polypharmacy; classes and efficacy of medications. Importance of collaboration while taking medications, eg, monitoring benefits and side effects

^aSource material derived from Gunderson.¹⁹

Statistical Analyses

Sociodemographic and clinical differences between groups were assessed using χ^2 and 2-sample *t* test (SPSS Statistics for Windows, version 23; IBM Corp; Armonk, New York). A repeated-measures analysis of variance (ANOVA) model was employed to assess progression of the main outcome measure (ZAN-BPD score) over time (pre- and post-intervention and follow-up as within-time factor) as well as between the psychoeducation and control groups. Cohen *d* effect size for repeated measures was performed to measure the change between pretreatment (T0) and posttreatment (T1) for each arm.²⁴ Effect sizes were classified as follows: small: $d \leq 0.2$; moderate: $0.02 < d \leq 0.5$; large: $0.5 < d \leq 0.8$; very large $d > 0.8$. Moreover, we used another effect size computation based on the total sample's mean improvement divided by the pooled standard deviation at the baseline to compare the 2 arms over time.

Furthermore, we also computed the number of responders and remission rates. Although our definition is quite restrictive, we consider as full response a decrease from baseline in ZAN-BPD total score of $> 50\%$, as was reported in a previous study²⁵ using ZAN-BPD as main outcome. It is worth noting that there is not a clear consensus about the definition of full response. On the basis of the range of scores on the ZAN-BPD (0–36), we used an alternative definition of response as a decrease of 20% (a statistically relevant change^{26,27}) of the ZAN-BPD scoring range (ie, ≥ 8 points), of partial response as a decrease of 10% (ie, between 4 and 8 points), and of stable or worsened condition as any changes under 4 points. For remission rate, we considered the categories of severity proposed by Zanarini et al²¹ (mild range, 1–9; moderate range, 10–18; severe range, ≥ 19). Lacking a clear cutoff for remission based on ZAN-BPD

Table 2. Sociodemographic and Clinical Data at Baseline^a

Variable	Psychoeducation Group (n = 48)	Control Group (n = 48)	P
Age, y	35 ± 10	34 ± 10	NS
Female	21 (44)	32 (67)	NS
Education			NS
Intermediate school	9 (19)	13 (27)	
High school	33 (69)	28 (59)	
College	3 (6)	2 (4)	
Graduate school	2 (4)	3 (6)	
Other	1 (2)	2 (4)	
Marital status			NS
Unmarried	27 (56)	29 (60)	
Married	11 (23)	9 (19)	
Divorced	10 (21)	10 (21)	
Occupational status			NS
Workers	14 (29)	15 (31)	
Protected job	2 (4)	1 (2)	
Unemployed	22 (46)	18 (38)	
Housewife	1 (2)	2 (4)	
Students	8 (17)	12 (25)	
Years of mental illness	5.47 ± 5.59	4.81 ± 5.23	NS
Pharmacotherapy	42 (88)	36 (75)	NS
Clinical variable: ZAN-BPD total score	22.0 ± 7.6	23.5 ± 6.2	NS

^aMean ± SD for continuous variables and frequency (%) for categorical variables are reported.

Abbreviations: NS = not significant, ZAN-BPD = Zanarini Rating Scale for Borderline Personality Disorder.

scale, we considered as remitted patients whose illness reached the mild range from other categories.

RESULTS

Sociodemographic and clinical features of participants from the BPD psychoeducation and BPD wait-list groups did not differ (Table 2). All BPD participants were outpatients;

Table 3. Results From Repeated-Measures Analyses of Variance for ZAN-BPD Total and Sector Scores^a

ZAN-BPD Score	Psychoeducation Group (n = 48)			Control Group (n = 48)			Effect (P value)		
	Baseline (T0)	After 6 Weeks (T1 to end of treatment)	8-Week Follow-Up (T2)	Baseline (T0)	After 6 Weeks (T1 to end of treatment)	8-Week Follow-Up (T2)			
							Time	Group	Time × Group
Total	22 ± 7.6	12.3 ± 7.4	13.0 ± 7.8	23.5 ± 6.2	22.2 ± 7.1	20.1 ± 7.4	<.001	<.001	<.001
Affect sector	8.7 ± 4.2	5.3 ± 4.6	5.45 ± 4.2	8.5 ± 2.6	8.2 ± 3.0	7.5 ± 3.2	<.001	<.001	<.001
Cognitive sector	5.2 ± 2.1	3 ± 2.1	3.3 ± 2.1	5.2 ± 1.8	5.3 ± 1.8	4.7 ± 2.0	<.001	<.001	<.001
Impulsivity sector	3.5 ± 2.2	2 ± 1.6	2.4 ± 1.8	4.4 ± 1.8	3.4 ± 2.0	3.1 ± 1.9	<.001	<.001	.100
Interpersonal sector	5.2 ± 2	3 ± 1.9	2.9 ± 2.1	5.5 ± 1.2	5.3 ± 2.0	4.7 ± 2.0	<.001	<.001	<.001

^aValues are shown as mean ± SD unless otherwise noted.

Abbreviation: ZAN-BPD: Zanarini Rating Scale for Borderline Personality Disorder.

the PEG had a mean ± SD disease history of 5.47 ± 5.59 years, and the control group had a mean ± SD disease history of 4.81 ± 5.23 years with no significant difference between the 2 groups. In regard to pharmacotherapy, there were no significant differences between groups (88% in the PEG vs 75% in the control group received pharmacotherapy). More than half of BPD patients completed high school, more than half were unmarried, and about one-third were employed.

BPD patients showed moderate-to-severe levels of BPD psychopathology on the ZAN-BPD. The repeated-measures ANOVA model for ZAN-BPD scores revealed significant effects for both time ($P < .001$) and group ($P < .001$) and also a significant interaction effect (time × group; $P < .001$) (Table 3) on the main outcome (ZAN-BPD total scores). The results remained stable at the follow-up evaluation. Similarly, a significant effect of treatment was found on the affective, cognitive, and interpersonal sectors of BPD psychopathology (Table 3). The PEG and wait-list group had a similarly significant effect on the ZAN-BPD impulsivity sector. The effect size for the change between baseline and posttreatment on the main outcome (ZAN-BPD score) was large (Cohen $d = -1.16$) for the psychoeducation intervention, while it was small (Cohen $d = -0.18$) in the BPD wait-list group. Furthermore, we found a between-arms effect size of 0.80 after treatment and 0.90 at follow-up.

With full response defined as a decrease of $\geq 50\%$ from baseline in ZAN-BPD total score, we found that 22 patients (46%) in the PEG and 3 (6%) in the control group could be considered as full responders. Furthermore, we found that 12 patients (25%) in the PEG and 4 (8%) in the control group showed a decrease of the total score from baseline in ZAN-BPD total score of a percentage between 30% and 40%. The remaining patients showed a low decrease or remained stable. Three patients (6%) in the PEG and 19 (40%) in the control group worsened. Using a decrease of 20% of the ZAN-BPD scoring range (8 points), we found similar results; indeed, 25 (52%) in the PEG and 5 (10%) in the control group were full responders, 15 (31%) in the PEG and 11 (23%) could be considered as partial responders, and 8 (17%) in the PEG and 32 (67%) in the control group remained stable or worsened.

Moreover, in the PEG, 13 patients (27%) reached the mild category from the moderate ($n = 5$; 10%) and the severe ($n = 8$; 17%) categories, while in the control group, only 1 patient (2%) could be considered to have remitted. It should be noted that 17 patients (35%) in the PEG and 6 (12%) in

the control group changed category of severity. Moreover, following Crawford and colleagues,²⁸ a reduction of 3 points in ZAN-BPD score is considered clinically significant. As a consequence, all of our patients who progressed symptomatically to a less severe category achieved a clinically significant decrease.

DISCUSSION

Results from our study support the efficacy of GPM-based group psychoeducation in the reduction of BPD symptomatology in a relatively unselected population of borderline patients admitted to a routine outpatient clinical setting. The effect of this intervention remained stable after 2 months. This result confirms a conclusion that starting treatment with disclosure of a borderline diagnosis and psychoeducation about its genetics, course, and treatment provides relief and stabilization.^{16,19} This intervention is clinically significant in its own right and sets the stage for further treatment.

As noted, because of the low socioeconomic status of the vast majority of this sample and their limited opportunities for treatment, there was an unusually high rate of compliance with the study protocol and a very high level of appreciation for the attention being given. The benefits of such concerned attention to patients with BPD have been documented. The large magnitude of the effect size, comparable with the one reported in other studies,¹⁸ indicates that the psychoeducation exerted additional benefits. In contrast, the small effect in the wait-list arm is consistent with prior research in which treatment-as-usual was used as a control.²⁹ It should be noted that although comprehensively only about one-third of the BPD patients in our study reached remission, a very large proportion progressed symptomatically to a less severe category, reaching a clinically significant decrease.

Our results are partially consistent with some previous studies. Zanarini and colleagues¹⁶ did not find a significant change in ZAN-BPD total scores although they reported a decrease over time considering the whole sample (psychoeducation + wait list). It should be noted that at baseline, patients included in the Zanarini et al study¹⁶ were on average in the moderate range and declined over time into the mild range. This result is substantially different from that of our study, since 74% of our patients had ZAN-BPD scores in the severe range at baseline, and in the PEG the

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most robust effect was observed only in the severe category. One could argue that patients with severe BPD could benefit from psychoeducation more than patients with moderate BPD, who probably are the ideal target of other types of intervention. Furthermore, the clinical sample included in the study by Zanarini et al¹⁶ was younger than our sample, and this aspect could represent an important difference in terms of disease stage and impact of treatment. Whereas Zanarini and colleagues, in a more recent study,¹⁷ reported that a web-based psychoeducation intervention for BPD was associated with a significant improvement in all BPD component sectors, we found that group psychoeducation was more effective on the cognitive, affective, and interpersonal sectors and, though it had a significantly positive effect on impulsivity, this effect was not greater than the effect for the wait-list control. The failure to have a differential effect on the impulsivity sector may be related to the control wait-list cell's particularly high baseline scores (with a greater regression to the mean). Why our result on impulsivity differed from that of Zanarini and colleagues may be related to the differences in samples: our sample was clinical, more impulsive, and older (the mean age was 35 years) and included males. In any event, the decrease observed during group psychoeducation was partially reversed on follow-up. The latter finding is hard to explain.

The value of group interventions is well documented in treatment of BPD.^{30–32} Indeed, these interventions account for much of the benefits of both dialectical behavioral therapy and mentalization-based therapy for BPD.^{33–35} Psychoeducation delivered in a group format facilitates patients' active participation and mutual support, and in the PEG it was also designed to increase awareness and support by the patients' social network. Compared with individualized interventions, group psychoeducation can be led by professionals without mandatory intensive training in psychotherapy. For mental health services where staff are usually composed of nurses and educators, these individuals can be easily involved in providing this intervention.

Our results support the concept that brief interventions can be effective for patients with BPD. Although evidence-based treatments for BPD have demonstrated positive outcomes, they usually are lengthy and expensive and, as a result, not easily available to most patients, especially in public services where resources are scarce.

Research data show that short-term interventions can also be beneficial. Systems Training for Emotional Predictability and Problem Solving (STEPPS) is a manualized 20-week

group program that has shown positive outcomes both as an adjunctive and as a stand-alone treatment.³⁰ Another brief intervention that proved to be beneficial, structured as a 6-session add-on individual treatment and specifically focused on self-harm, is the one described by Weinberg and colleagues.³⁶ A recently published study,³⁷ within a stepped-care framework, demonstrated that a 12-week intervention, with group and individual therapy, was sufficient to significantly impact most outcome measures. Also notable is that some significant gains with some evidence-based treatments occur within the first months of therapy.^{38,39} Considering that, to date, there is no evidence that longer BPD treatments are superior to shorter treatments,⁴⁰ more intensive and extended therapies should be reserved for those who fail to respond to briefer interventions.

Overall, the short length, the low cost in staff time, and the easy training make group psychoeducation a good candidate for implementation in stepped care or general mental health services.³ It should be noted that in Italy, as in the rest of the world, there is a paucity of specialized programs for BPD in mental health services.⁴¹ Individual psychotherapeutic interventions, which are often recommended for patients with BPD, are not easily available due to their time and experience requirements as well as an overall lack of dedicated therapists. In the absence of such services, the treatment of BPD often devolves into pharmacotherapy. The benefits shown for psychoeducation groups offer a viable and, almost certainly, a more effective alternative.

This study is in need of replication with methodological improvements. Raters should be blinded with documented reliabilities to diminish the likelihood of sizable errors that could affect the results. Follow-up should be longer and include assessment of treatment utilization, suicidality, and costs. A comparison group should control for the amount of time and attention given to patients in the PEG. Even as we recognize the need for such improved methods, we think it unlikely that these would have greatly affected our current findings.

That a short-term group intervention provided by non-specialists could dramatically benefit BPD patients in underserved settings has potentially large public health significance. It is notable that this study was unfunded and was conducted in a relatively large sample whose promising results apply to the sort of clinical setting that is the most common for the care of BPD patients and the least common for treatment research.

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