Psychiatr Q (2015) 86:49–60
DOI 10.1007/s11126-014-9317-3

ORIGINAL PAPER

Types of Borderline Personality Disorder (BPD) in Patients Admitted for Suicide-Related Behavior

Federico Rebok · Germán L. Teti · Adrián P. Fantini · Christian Cárdenas-Delgado · Sasha M. Rojas · María N. C. Derito · Federico M. Daray

Published online: 2 September 2014

Abstract Borderline personality disorder (BPD) is determined by the presence of any five of nine diagnostic criteria, leading patients with heterogeneous clinical features to be diagnosed under the same label without an individualized clinical and therapeutic approach. In response to this problem, Oldham proposed five types of BPD: affective, impulsive, aggressive, dependent and empty. The present study categorized a sample of BPD patients hospitalized due to suicide-related behavior according to Oldham's BPD proposed subtypes, and evaluated their clinical and demographic characteristics. Data were obtained from a sample of 93 female patients admitted to the « Dr. Braulio A. Moyano » Neuropsychiatric Hospital following suicide-related behavior. A total of 87 patients were classified as affective (26 %), impulsive (37 %), aggressive (4 %), dependent (29 %), and empty (5 %). Patients classified as dependent were significantly older at the time of first suicide-related behavior ($p = 0.0008$) and reported significantly less events of previous suicide-related behaviors ($p = 0.03$), while patients classified as impulsive reported significantly higher rates of drug use ($p = 0.02$). Dependent, impulsive and affective BPD types were observed most frequently in our sample. Findings are discussed specific to

F. Rebok · G. L. Teti · F. M. Daray (✉)
3a Cátedra de Farmacología, Facultad de Medicina, Universidad de Buenos Aires, Paraguay 2155, piso 9, C1121ABG, Ciudad de Buenos Aires, Buenos Aires, Argentina
e-mail: fdaray@hotmail.com

F. Rebok
e-mail: federicorebok@gmail.com

F. Rebok · G. L. Teti · A. P. Fantini · C. Cárdenas-Delgado · M. N. C. Derito
Servicio de Guardia, Hospital «Dr. Braulio A. Moyano», Buenos Aires, Argentina

F. Rebok
Carrera de Investigador, Gobierno de La Ciudad de Buenos Aires, Buenos Aires, Argentina

S. M. Rojas
Department of Psychological Science, University of Arkansas, Fayetteville, AR, USA

F. M. Daray
Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Argentina

demographic and clinical implications of BPD patients reporting concurrent suicidal behavior.

Keywords Borderline personality disorder · Types · Suicide-related behavior · Inpatients

Introduction

Borderline personality disorder (BPD) is defined as a chronic psychiatric disorder characterized by a pervasive pattern of instability in affect regulation, impulse control, interpersonal relationships and self-image; concurrently defined by repeated self-injury and chronic suicidal behavior [1–3]. Indeed, BPD is the most frequently diagnosed personality disorder, representing 10 % of outpatients and 15 to 25 % of hospitalized patients [4, 5]. Worth noting, 80 % of patients receiving therapy for BPD are women [6]. Research further suggests that 75 % of patients diagnosed with BPD attempt suicide in their lifetime, while between 5 and 10 % of these patients will eventually die by suicide [1, 7]. As such, the appropriate assessment and management of suicidal risk in patients diagnosed with BPD is one of the greatest challenges in modern psychiatry [8].

The diagnosis of BPD, in accord with DSM-IV-TR criteria, is determined by the presence of any five of the nine diagnostic criteria [9]. Thus, several combinations of these diagnostic criteria may make up for the diagnosis of BPD [10]. In addition, some patients evidencing clinically significant symptoms may not meet the minimum of five diagnostic criteria required for an official diagnosis [9]. Accordingly, several patients with heterogeneous clinical features may be diagnosed under the same label without any differentiation in their clinical treatment plans. In response to this problem, Oldham proposed a typing system based on suggested theories specific to the etiology of BPD [11, 12]. He suggested five distinct subtypes of BPD that are described in further detail below.

Type 1: Affective

This type is expounded on as an atypical, moderately heritable form of a mood disorder. Patients categorized as this type frequently experience intense anxiety or depression, and often exhibit suicidal gestures in response to interpersonal stress [9, 11, 12].

Type 2: Impulsive

This type is defined as a form of impulse control disorder, reflecting an action-oriented inborn temperament. A vast amount of research has characterized BPD as an impulse-spectrum disorder [13–16]. For instance, patients may engage in impulsive self-injurious behavior, such as cutting and burning themselves, or they may engage in other impulsive, self-destructive behavior (e.g. substance abuse, binge eating, or reckless driving).

Type 3: Aggressive

This type is described as a primary constitutional temperament [17] or a counteraction to early trauma, abuse, or neglect [18]. Evidence suggests, that the aggression characteristics expressed by patients diagnosed with BPD may be correlated with reduced central nervous

system serotonin levels or other neurotransmitter or neuroendocrine irregularities [15]. Individuals characterized as this type frequently become intensely and inappropriately angry or irritable.

Type 4: Dependent

Individuals characterized as this type typically express an intolerance of being alone. According to Masterson and colleagues, the foundation for future borderline pathology, for specific cases, may partly be due to parental intolerance of autonomy development in the child [19, 20]. These patients may be overly compliant, clinging in relationships, and constantly fearing abandonment.

Type 5: Empty

Individuals characterized as this type lack a stable self-identity, which often reflects inconstant early parenting. These patients lack a "centered" sense of self, and describe a feeling of inner emptiness and lack of independent goal-directedness [9].

The theoretical distinction of these BPD types may be particularly important for prognosis and development of therapeutic approaches for patients suffering from BPD. For example, those described as affective, impulsive, and aggressive type greatly rely on pharmacotherapy; specifically, these individuals may benefit from pharmacotherapy early in the course of treatment until affect regulation and impulse control have stabilized [11]. On the other hand, a psychotherapeutic approach may be most advantageous for individuals diagnosed with BPD and described as dependent and empty. In accord with the BPD subtypes proposed by Oldham, the present explorative study aims to categorize a sample of patients diagnosed with BPD hospitalized due to suicide-related behavior. To enhance our understanding of the clinical picture of these patients, demographic and clinical similarities and differences were identified across specific BPD types.

Methods

Study Design

The study used a cross-sectional design to examine demographic and clinical variables among all included participants who met study criteria, female patients diagnosed with BPD who were admitted due to preceding suicide-related behavior.

Participants

A total of 93 women diagnosed with BPD and recent suicidal behavior were enrolled in the study. Specifically, female patients diagnosed with BPD and who were consecutively admitted to the « Dr. Braulio A. Moyano » Neuropsychiatric Hospital from July 2010 to July 2012, after engaging in suicide-related behavior, met study criteria. The « Dr. Braulio A. Moyano » Hospital, a women neuropsychiatric hospital, serves a large urban, catchment area in Buenos Aires, Argentina. The hospital predominantly treats lower-income, uninsured patients.

Procedure

The present study was approved by the Ethics Committee of the « Dr. Braulio A. Moyano » Neuropsychiatric Hospital. Following hospital admission, all potential patients were given a complete description of the study and invited to participate. Inclusion criteria included meeting Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition Text Revision (DSM-IV-TR) [1] criteria for BPD and consulting for recent suicide-related behavior that occurred in the last 72 h. Additionally, only patients between ages 18 and 65 years and who possessed the ability to read and speak in Spanish were included. Suicide related behavior was defined as potentially self-injurious behavior with explicit or implicit evidence that (a) the patient intended at some level to kill herself, or (b) the patient wished to use the appearance of intending to kill herself in order to attain a different outcome (e.g., to seek help, to punish others, to receive attention). Suicide-related behavior comprises of suicidal acts (i.e. suicide attempt and completed suicide) and instrumental suicide-related behavior (i.e. suicide threat, other instrumental suicide-related behavior, and accidental death associated with instrumental suicide-related behavior) [21]. All patients who met criteria for mental retardation were excluded from the present study. After being fully informed of the study purpose and study methods, each patient who accepted to participate provided written informed consent. All participants were fully debriefed at the end of the study.

Measures and Assessment

Two trained psychiatrists completed a structured clinical evaluation with each patient to determine the psychiatric diagnosis based on DSM-IV-TR criteria. After diagnostic criteria for BPD was determined, the psychiatrists reached an agreement regarding which of the nine diagnostic criteria of BPD predominated in the overall symptom pattern. Further, the psychiatrists assigned each patient to one of the five BPD types proposed by Oldham. The psychiatric researchers aimed to reach consensus opinion regarding the diagnosis of BPD sub-types. However, in the event that there was disagreement, BPD subtype was determined by a third party (M.N.C.D.). Following, patients who meet BPD criteria were given an assessment battery that included a list of questions regarding demographic and clinical variables. The Spanish version of the Barratt Impulsiveness Scale, version 11 (BIS-11) was administered to measure impulsivity [22, 23]. Item 10, which is indexed by six statements, from the Montgomery-Asberg Depression Rating Scale (MADRS; e.g. active preparations for suicide) was used to measure suicidal behavior. This item specifically targets suicidal thoughts.

Statistical Analysis

A descriptive analysis was conducted to compare demographic and clinical variables between the three most frequent BPD types (i.e. affective, impulsive, and dependent). Categorical measures were reported as a frequency or percentage, and compared with contingency tables (χ^2). Moreover, continuous measures were reported as mean $\pm$ standard deviation (SD) and compared by ANOVA methods (*t* test) or Wilcoxon rank-sum test (Mann–Whitney U-statistic) for non-normally distributed continuous data. The threshold for statistical significance was set at $p < 0.05$. Finally, all statistical analyses were conducted using STATA 8.0 software.

Results

A total of 87 patients met inclusion criteria, while six patients were excluded for failure to provide informed written consent (N = 5) or for their inability to read and speak fluently in Spanish (N = 1).The included sample represented a mean age of 35 years, and the majority of patients were Argentine. Other demographic variables indicate that 30 % of the sample was married, 40 % of the sample was currently employed with a stable occupation, and the patients reported completion of a mean of 10 years of education. Additionally, 40 % of patients reported a history of sexual abuse. Moreover, almost 80 % of patients had an Axis I diagnosis of major depressive disorder. In regards to suicidal behavior, patients reported a mean age of 25 years for the first suicide-related behavior. Additionally, the patient sample reported a mean of four previous incidents of suicide-related behavior, while approximately 50 % of the sample indicated no previous hospital admissions due to suicide-related behavior. Additional clinical and demographic variables can be found in Table 1.

Of the evaluated sample, 32 patients (37 %) were classified as the impulsive type, 25 patients (29 %) as the dependent type, and 23 patients (26 %) as the affective type. The other two types were less frequent; only 4 patients (5 %) were classified as the empty type and 3 patients (3 %) were identified as the aggressive type (Table 2). Table 3 reports results specific to a comparison of the three most common types of BPD (i.e. affective, impulsive, and dependent). Results indicate that patients from the dependent type were older, typically experienced first suicide-related behavior at an older age, and had fewer past suicide-related behaviors. In addition, substance use was less frequent, while impulsivity levels were lowest in the dependent type. Moreover, patients within the impulsive and affective types were younger, engaged in first time suicide-related behavior at a younger age, and also reported more suicide-related behaviors compared to the dependent type. Patients characterized as the impulsive type reported the greatest rates of substance abuse and highest scores of impulsivity. Lastly, the three types did not differ in religious practice, years of education, employment, history of sexual abuse, number of hospitalizations, or a family history of psychiatric illness (Table 3).

Discussion

Patients experiencing symptoms specific to BPD pathology are frequently evaluated in clinical practice. Fundamentally, this personality disorder is thought to introduce some of the most difficult and troubling problems in psychiatry. As described, the DSM-IV-TR diagnosis of BPD is determined by the combination of any five of the nine diagnostic criteria for the disorder; therefore, numerous combinations of criteria can constitute an "official" diagnosis of borderline personality disorder. Avoiding this generalization is crucial given that all patients with borderline personality disorder are not the same [24]. In respect to the heterogeneity of BPD, identification of BPD types may lead to better prediction, assessment, and specific interventions tailored to patient needs. Correspondingly, a subtyping system based on theories relevant to the etiology of borderline personality disorder was proposed [9]. To our knowledge, this is the first study that attempts to identify the frequency of BPD subtypes, specifically affective, impulsive, and dependent, aggressive, and empty, as characterized among patients hospitalized due to suicide-related behavior. Our results demonstrate that the affective, impulsive and dependent types are

Table 1 Demographic and clinical variables

Mean age (SD, range)	35.68	(11.61; 18–58)
Years of Education (SD, range)	10.23	(2.97; 2–17)
Argentinean nationality, N (%)	79	91 %
Relationship status, N (%)		
Single	35	40 %
Married/living with a partner	26	30 %
Divorced	21	24 %
Widowed	5	6 %
Axis I diagnosis, N (%)		
MDD	68	78 %
PTSD	6	7 %
Others	8	15 %
Age at first suicide attempt (SD, range)	24.79	(11.10; 8–54)
Prior suicide attempt (SD, range)	4.37	(5.65; 0–30)
Prior hospitalization (SD, range)		
None	41	47 %
1–3	32	38 %
>3	14	15 %
Use of drugs, N (%)	33	38 %
Sexual Abuse History	40	46 %
Characteristic of the suicide methods, N (%)		
Drug ingestion	39	45 %
Cutting	16	19 %
Others	32	36 %
Practice a religion, N (%)	34	39 %
Occupation, N (%)		
Work	35	40 %
Unoccupied	52	60 %
Family history of psychiatric illness, N (%)	69	79 %
MADRS item 10 (SD, range)	3.72	(1.61; 2–6)
Barratt Impulsiveness Scale (SD, range)	67.08	(16.66; 26–104)

MADRS item 10

SD standard deviation; *N* number of patients

Table 2 Borderline personality disorder types (n = 87)

Type	Frequency (n)	Percent (%)
Affective	23	26.44
Impulsive	32	36.78
Aggressive	3	3.45
Dependent	25	28.74
Empty	4	4.60

Table 3 Comparison between types of BPD

	Affective type (N = 23)		Impulsive type (N = 32)		Dependent type (N = 25)		*p*
Age, mean (SD; range)[§]	34.96	(12.67; 19–58)	32.75	(10,27; 18–54)	41.44	(10.96; 18–54)*	**0.02**
Scholarship, mean (SD; range)[§]	10.22	(2.58; 4–15)	10.28	(3,05; 2–16)	10.48	(3.20; 4–17)	0.95
Married/living with a partner, N (%)[‡]	8	34,78 %	8	25 %	8	32 %	0.71
Practice a religion, N (%)[‡]	11	48 %	11	34 %	10	32 %	0.60
Occupation/Work, N (%)[‡]	8	35 %	17	53 %	9	36 %	0.29
Age at first suicide attempt, mean (SD; range)[§]	19.87	(8.10; 10–41)	23.31	(8.92; 8–46)	31.08	(12.98; 9–54)*	**0.0008**
Prior suicide attempt, mean (SD; range)[†]	5.65	(6.02; 0–20)	5.03	(6.33; 0–30)	2.60	(4.09; 0–20)*	**0.03**
Prior hospitalization, mean (SD; range)[†]	1.35	(1.67; 0–5)	2,31	(3.60; 0–13)	1.32	(2.54; 0–12)	0.58
Characteristic of the suicide methods, N (%)[‡]							
Cutting	2	9 %	9	28 %	3	12 %	0.15
Drug ingestion	13	57 %	11	34 %	11	44 %	
Others	8	35 %	12	38 %	11	44 %	
Use of drugs, N (%)[‡]	9	39 %	18	56 %*	5	20 %	**0.02**
Sexual Abuse History, N (%)[‡]	9	39 %	15	47 %	11	44 %	0.85
Family history of psychiatric illness, N (%)[‡]	20	87 %	26	81 %	18	72 %	0.14
Axis I diagnosis, N (%)[‡]							
MDD	15	65 %	27	84 %	21	84 %	
Others	8	35 %	5	16 %	4	16 %	
Barratt Impulsive Scale, mean (SD; range)[§]	64	(17.68; 36–99)	76.34	(11.53; 53–100)*	58,28	(13.37; 38–84)	**<0.0001**
MADRS item 10, mean (SD; range)[†]	3.65	(1.77; 2–6)	3.87	(1.34; 2–6)	3,68	(1.80; 2–6)	0.95

Bold values are statistically significant ($p < 0.05$)

[§] One-way analysis of variance (ANOVA) test

[†] Kruskal–Wallis test

[‡] Chi square test standard deviation and range specified in parenthesis

* p value < 0.05

most frequently found in our sample, while aggressive and empty types were identified in less than 5 % of the patient sample.

The scarce amount of aggressive and empty types in our sample may be explained in several ways. In particular, the aggressive type could be an infrequent type observed in clinical settings, being that the characteristics of these types are more often observed in inmates, especially those BPD patients with antisocial personality traits or comorbid antisocial personality disorder [25]. Secondly, indeed "chronic feelings of emptiness" are present in approximately 71–73 % of BPD patients within the empty type [26, 27]. Feelings of emptiness relate to depressive symptoms [28] and may precede suicide attempts [29], yet this criteria can be difficult to define and assess because many patients may not fully understand the term feeling "empty." In fact, as indicated by previous research, this symptom evidences the lowest item-total correlation and diagnostic efficiency among all other BPD criteria [27, 30, 31].

Specific to the clinical and demographic comparison among the affective, impulsive, and dependent types of BPD, dependent patients were significantly older and reported significantly less previous suicide-related behaviors than the affective and impulsive types. Our finding regarding less incidents of previous suicide related behaviors is in accord with Oldham's hypothesis that suicidal symptoms, as defined by DSM-IV-TR criterion 5 (i.e. recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior), would be especially prominent if dysregulation of either affect or impulse control predominates the overall symptom pattern [9]. Thus, patients characterized by this type of BPD may be at lower risk for completed suicide, given fewer previous suicide-related behaviors are reported, and also these patients exhibited less frequency of substance use, and scored lower scores of impulsivity. As suggested by Oldham, the dependent type may mainly benefit from a psychotherapeutic approach, since affect regulation and impulse control are stabilized [9, 11, 12].

The patients described as an impulsive type had a similar profile to the affective group in terms of age of onset for first suicide-related behavior and number of past suicide-related behaviors. However, some differences can be identified between these groups, particularly in the levels of impulsivity and substance use. As expected, patients identified as the impulsive type reported significantly higher scores in the Barratt Impulsivity Scale (BIS), and showed a higher frequency of substance use. The BIS serves as a direct measure of impulsivity and substance abuse is thought of as an indirect measure of impulsiveness. Thus, the greater frequency of substance use may be explained by the higher levels of impulsivity correlated with substance abuse [32]. Noteworthy, traits of impulsivity and aggression seem to be very characteristic of patients diagnosed with BPD, which may help differentiate these patients from those suffering from bipolar disorder [33, 34].

Affective instability is a common trait for both BPD and bipolar II disorder (BPII), which may account for the overlap in the efficacy of mood stabilizers and the high frequency of comorbidity for these two diagnoses [35]. Specifically, Mitropoulou and colleagues found that BPD patients were more impulsive and aggressive compared to bipolar patients and patients with other personality disorders [35]. Accordingly, previous studies indicate that impulsive and aggressive traits are very characteristic of BPD [33, 34]. In our sample, those characterized as the affective type expressed less impulsivity than the impulsive type. Yet, several studies have documented a reliable prognosis course for BPD, therefore implying that a strong spectrum relationship with bipolar disorder is extremely unlikely [36–40]. As Oldham has already proposed, the affective type needs a greater reliance on pharmacotherapy, particularly early in the course of treatment, until affect regulation has stabilized [9, 11, 12].

Almost half of our patient sample reported an incident of previous sexual abuse. Yet, the three most common subtypes (i.e. affective, impulsive, and dependent) of our sample reported no significant differences specific to histories of sexual abuse. The high-prevalence of sexual abuse history found in our sample is consistent with the range of sexual abuse experienced by individuals suffering from BPD, as indicated in previous work [41–47]. Thus, the history of sexual abuse is a critical risk factor to assess for. In fact, previous work suggests patients experiencing a history of childhood sexual abuse are at a tenfold increased risk for a future suicide attempt [48].

In summary, of the five types of BPD suggested by Oldham, the affective, impulsive, and dependent types were most frequently observed among our patient sample; all patients in our sample were hospitalized due to recent suicide-related behavior. The patients associated with the dependent type tend to be significantly older and reported significantly less previous suicide-related behaviors as compared to the affective and impulsive types. These two latter types differ in the Barratt Impulsivity Scale (BIS) score and in the frequency of substance use.

Limitations

The current investigation is based on the theoretical framework proposed by Oldham, which needs empirical validation. Additionally, the current study has a number of limitations that should be considered. First, the study used a cross-sectional design, not permitting us to infer temporal conclusions or patterns of evolution in these patients. Secondly, this sample is limited to only a female population; nonetheless, 80 % patients diagnosed with BPD are in fact women [13]. Finally, it should be noted that the population studied was of great severity, as all patients were hospitalized in a neuropsychiatric hospital due to suicide-related behavior that occurred in the last 72 h. Taking this into account, the results may not be representative of ambulatory patients. Future investigations may greatly benefit from a recommended standardized procedure or a developed instrument specifically targeting how to differentiate between the specific types of BPD as proposed by Oldham. Notwithstanding the current limitations, this descriptive investigation further advances our understanding of the types of BPD as experienced by patients with recent suicide-related behavior.

Acknowledgments This study has no financial support. The authors report no financial or other relationship relevant to the subject of this article.

Conflict of interest All authors declare that they have no conflicts of interest.

References

1. American Psychiatric Association., American Psychiatric Association. Task Force on DSM-IV. Diagnostic and statistical manual of mental disorders : DSM-IV-TR. 4th edn, Washington, American Psychiatric Association, 2000.
2. Paris J: Borderline personality disorder. CMAJ 172(12):1579–1583, 2005.
3. Lieb K, Vollm B, Rucker G, Timmer A, Stoffers JM: Pharmacotherapy for borderline personality disorder: Cochrane systematic review of randomised trials. The British Journal of Psychiatry 196(1):4–12, 2010.
4. Gunderson JG: Borderline personality disorder: Ontogeny of a diagnosis. The American Journal of Psychiatry 166(5):530–539, 2009.

5. Oldham JM, Skodol AE, Bender DS: The American Psychiatric Publishing textbook of personality disorders, 1st edn., Washington, American Psychiatric Pub., 2005.
6. Skodol AE, Gunderson JG, Pfohl B, Widiger TA, Livesley WJ, Siever LJ: The borderline diagnosis I: Psychopathology, comorbidity, and personality structure. Biological Psychiatry 51(12):936–950, 2002.
7. Black DW, Blum N, Pfohl B, Hale N: Suicidal behavior in borderline personality disorder: prevalence, risk factors, prediction, and prevention. Journal of Personality Disorders 18(3):226–239, 2004.
8. Goodman M, Roiff T, Oakes AH, Paris J: Suicidal risk and management in borderline personality disorder. Current Psychiatry Reports 14(1):79–85, 2012.
9. Oldham JM: Borderline personality disorder and suicidality. The American Journal of Psychiatry 163(1):20–26, 2006.
10. Clarkin JF, Widiger TA, Frances A, Hurt SW, Gilmore M: Prototypic typology and the borderline personality disorder. The Journal of Abnormal Psychology 92(3):263–275, 1983.
11. Oldham JM: Integrated Treatment Planning for Borderline Personality Disorder. In: Washington KJ (Ed) Integrated Treatment of Psychiatric Disorders. Washington, American Psychiatric Publishing, p. 51–77, 2001.
12. Oldham JM: A 44-year-old woman with borderline personality disorder. JAMA 287(8):1029–1037, 2002.
13. Gunderson J: Links PS. Borderline Personality Disorder: a Clinical Guide, 2nd edn., Arlington, American Psychiatric Publishing, 2008.
14. Zanarini MC: BPD as an Impulse Control Disorder. In: Paris J (Ed) Borderline Personality Disorder: Etiology and Treatment. Washington, American Psychiatric Press Inc, 1993.
15. Siever LJ: Relationship Between Impulsivity and Compulsivity: A Synthesis. In: Oldham JM, Hollander E, Skodol AE (Eds) Impulsivity and Compulsivity. Washington, American Psychiatric Press Inc, 1996.
16. Links PS, Heslegrave RJ: Prospective studies of outcome. Understanding mechanisms of change in patients with borderline personality disorder. Psychiatric Clinics of North America 23(1):137–150, 2000.
17. Kernberg O (Ed): Borderline Conditions and Pathological Narcissism. New York, Jason Aronson, 1975.
18. Zanarini MC, Frankenburg FR: Pathways to the development of borderline personality disorder. Journal of Personality Disorders 11(1):93–104, 1997.
19. Masterson J (Ed): Treatment of the Borderline Adolescent: A Developmental Approach. New York, John Wiley & Sons, 1972.
20. Masterson JF, Rinsley DB: The borderline syndrome: the role of the mother in the genesis and psychic structure of the borderline personality. International Journal of Psychoanalysis 56(2):163–177, 1975.
21. O'Carroll PW, Berman AL, Maris RW, Moscicki EK, Tanney BL, Silverman MM: Beyond the Tower of Babel: a nomenclature for suicidology. Suicide and Life Threatening Behavior 26(3):237–252, 1996.
22. Oquendo MA, Baca-García E, Graver R, Morales M, Montalvan V, Mann JJ: Spanish adaptation of the Barratt Impulsiveness Scale (BIS-11). European Journal of Psychiatry 15(3):147–155, 2001.
23. Lopez PL, Cetkovich-Bakmas M, Lischinsky A, Alvarez Prado D, Torrente F: [Psychometric properties of the Barratt Impulsiveness Scale in a sample of the city of Buenos Aires]. Vertex 23(102):85–91, 2012.
24. Asnaani A, Chelminski I, Young D, Zimmerman M: Heterogeneity of borderline personality disorder: do the number of criteria met make a difference? Journal of Personality Disorders 21(6):615–625, 2007.
25. Howard RC, Huband N, Duggan C, Mannion A: Exploring the link between personality disorder and criminality in a community sample. Journal of Personality Disorders 22(6):589–603, 2008.
26. Grilo CM, McGlashan TH, Morey LC, Gunderson JG, Skodol AE, Shea MT, et al.L: Internal consistency, intercriterion overlap and diagnostic efficiency of criteria sets for DSM-IV schizotypal, borderline, avoidant and obsessive-compulsive personality disorders. Acta Psychiatrica Scandinavica 104(4):264–272, 2001.
27. Johansen M, Karterud S, Pedersen G, Gude T, Falkum E: An investigation of the prototype validity of the borderline DSM-IV construct. Acta Psychiatrica Scandinavica 109(4):289–298, 2004.
28. Trull TJ, Widiger TA: The relationship between borderline personality criteria and dysthymia symptoms. Journal of Psychopathology and Behavioral Assessment 13:91–105, 1991.
29. Schnyder U, Valach L, Bichsel K, Michel K: Attempted suicide. Do we understand the patients' reasons? General Hospital Psychiatry 21(1):62–69, 1999.
30. Widiger TA (Ed). Personality Disorder Interview-IV: A Semistructured Interview for the Assessment of Personality Disorders. Odessa, Psychological Assessment Resources, 1995.
31. Klonsky ED: What is emptiness? Clarifying the 7th criterion for borderline personality disorder. Journal of Personality Disorders 22(4):418–426, 2008.
32. de Wit H: Impulsivity as a determinant and consequence of drug use: a review of underlying processes. Addiction Biology 14(1):22–31, 2009.

33. Pattison EM, Kahan J: The deliberate self-harm syndrome. The American Journal of Psychiatry 140(7):867–872, 1983.
34. New AS, Sevin EM, Mitropoulou V, Reynolds D, Novotny SL, Callahan A, et al.: Serum cholesterol and impulsivity in personality disorders. Psychiatry Residency 22;85(2):145–150, 1999.
35. Henry C, Mitropoulou V, New AS, Koenigsberg HW, Silverman J, Siever LJ: Affective instability and impulsivity in borderline personality and bipolar II disorders: similarities and differences. Journal of Psychiatric Research 35(6):307–312, 2001.
36. Shea MT, Stout RL, Yen S, Pagano ME, Skodol AE, Morey LC, et al.: Associations in the course of personality disorders and Axis I disorders over time. The Journal of Abnormal Psychology 113(4):499–508, 2004.
37. Gunderson JG, Morey LC, Stout RL, Skodol AE, Shea MT, McGlashan TH, et al.: Major depressive disorder and borderline personality disorder revisited: longitudinal interactions. The Journal of Clinical Psychiatry 65(8):1049–1056, 2004.
38. Grilo CM, Sanislow CA, Gunderson JG, Pagano ME, Yen S, Zanarini MC, et al.: Two-year stability and change of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. Journal of Consulting and Clinical Psychology 72(5):767–775, 2004.
39. Zanarini MC, Frankenburg FR, Hennen J, Silk KR: The longitudinal course of borderline psychopathology: 6-year prospective follow-up of the phenomenology of borderline personality disorder. The American Journal of Psychiatry 160(2):274–283, 2003.
40. Gunderson JG, Weinberg I, Daversa MT, Kueppenbender KD, Zanarini MC, Shea MT, et al.: Descriptive and longitudinal observations on the relationship of borderline personality disorder and bipolar disorder. The American Journal of Psychiatry 163(7):1173–1178, 2006.
41. Zanarini MC, Williams AA, Lewis RE, Reich RB, Vera SC, Marino MF, et al.: Reported pathological childhood experiences associated with the development of borderline personality disorder. The American Journal of Psychiatry 154(8):1101–1106, 1997.
42. Zanarini MC, Gunderson JG, Marino MF, Schwartz EO, Frankenburg FR: Childhood experiences of borderline patients. Comprehensive Psychiatry 30(1):18–25, 1989.
43. Herman JL, Perry JC, van der Kolk BA: Childhood trauma in borderline personality disorder. The American Journal of Psychiatry 146(4):490–495, 1989.
44. Links PS, Steiner M, Offord DR, Eppel A: Characteristics of borderline personality disorder: a Canadian study. The Canadian Journal of Psychiatry 33(5):336–340, 1988.
45. Ogata SN, Silk KR, Goodrich S, Lohr NE, Westen D, Hill EM: Childhood sexual and physical abuse in adult patients with borderline personality disorder. The American Journal of Psychiatry 147(8):1008–1013, 1990.
46. Paris J, Zweig-Frank H, Guzder J: Psychological risk factors for borderline personality disorder in female patients. Comprehensive Psychiatry 35(4):301–305, 1994.
47. Paris J, Zweig-Frank H, Guzder J: Risk factors for borderline personality in male outpatients. Journal of Nervous and Mental Disease 182(7):375–380, 1994.
48. Soloff PH, Lynch KG, Kelly TM: Childhood abuse as a risk factor for suicidal behavior in borderline personality disorder. Journal of Personality Disorders 16(3):201–214, 2002.

Federico Rebok, MD is a Chief Psychiatrist at the Emergency Department, Hospital Moyano, Buenos Aires, Argentina and Associated Researcher at the Gobierno de la Ciudad Autónoma de Buenos Aires, Argentina. His research interests are on Suicide and Schizophrenia, and he is presently researching on Suicide.

Germán L. Teti, MD is a Psychiatrist at the Emergency Department, Hospital Moyano, Buenos Aires, Argentina. His area of interest is on Suicide.

Adrián P. Fantini, MD is a Forensic Psychiatrist at the Provincia de Córdoba, Argentina. His research interest includes Borderline Personality Disorder, and he is presently researching on Suicide.

Christian Cárdenas-Delgado, MD is a Psychiatrist at the Emergency Department, Hospital Moyano, Buenos Aires, Argentina. His research interest is on Psychosis, and he is presently researching on Suicide.

Sasha M. Rojas, BA is a doctoral student in the Department of Psychological Science at the University of Arkansas, USA. She is interested in understanding suicidal behaviors among hispanic adolescents via emotion regulation strategies.

María N.C. Derito, MD is an Assistant Manager at the Hospital Moyano, Buenos Aires, Argentina. She is presently researching on Suicide.

Federico M. Daray, MD, PhD is an Assistant Researcher at the CONICET, Argentina. His research interest is on Suicide and Pharmacogenetics, and he is presently researching on Genetics.