

Assessment, Diagnosis and Treatment of Borderline Personality Disorder

Mark Zimmerman, MD

Chief of Psychiatry and Behavioral Health

South County Psychiatry

Professor of Psychiatry and Human Behavior

Brown University Medical School

Providence, Rhode Island



Faculty Disclosures

- Mark Zimmerman, MD is the owner of Psych Products Press, the publisher of his Interview Guide.



Faculty Disclosures

COMMENTARY

Borderline Personality Disorder

A Disorder in Search of Advocacy

Mark Zimmerman, MD

Why BPD Needs Advocates

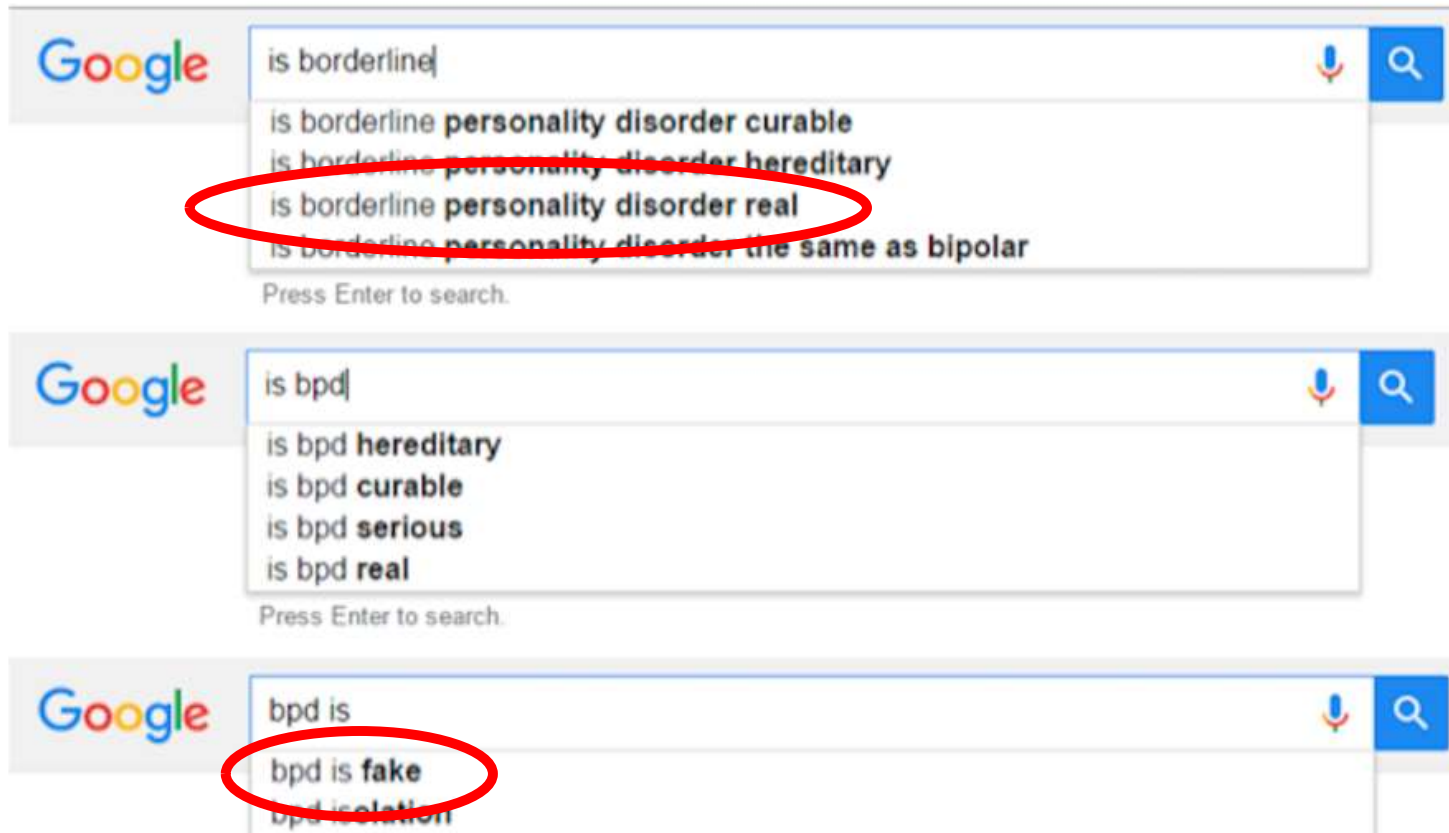
The image displays three sequential screenshots of a Google search interface, each showing search suggestions for a query related to Borderline Personality Disorder (BPD). The first screenshot shows the query 'is borderline' with suggestions: 'is borderline **personality disorder curable**', 'is borderline **personality disorder hereditary**', 'is borderline **personality disorder real**', and 'is borderline **personality disorder the same as bipolar**'. The second screenshot shows the query 'is bpd' with suggestions: 'is bpd **hereditary**', 'is bpd **curable**', 'is bpd **serious**', and 'is bpd **real**'. The third screenshot shows the query 'bpd is' with suggestions: 'bpd is **fake**' and 'bpd **isolation**'. Each screenshot includes the Google logo, a search bar with the query, a microphone icon, a search button, and the instruction 'Press Enter to search.'.

Google is borderline|
is borderline **personality disorder curable**
is borderline **personality disorder hereditary**
is borderline **personality disorder real**
is borderline **personality disorder the same as bipolar**
Press Enter to search.

Google is bpd|
is bpd **hereditary**
is bpd **curable**
is bpd **serious**
is bpd **real**
Press Enter to search.

Google bpd is
bpd is **fake**
bpd **isolation**

Why BPD Needs Advocates



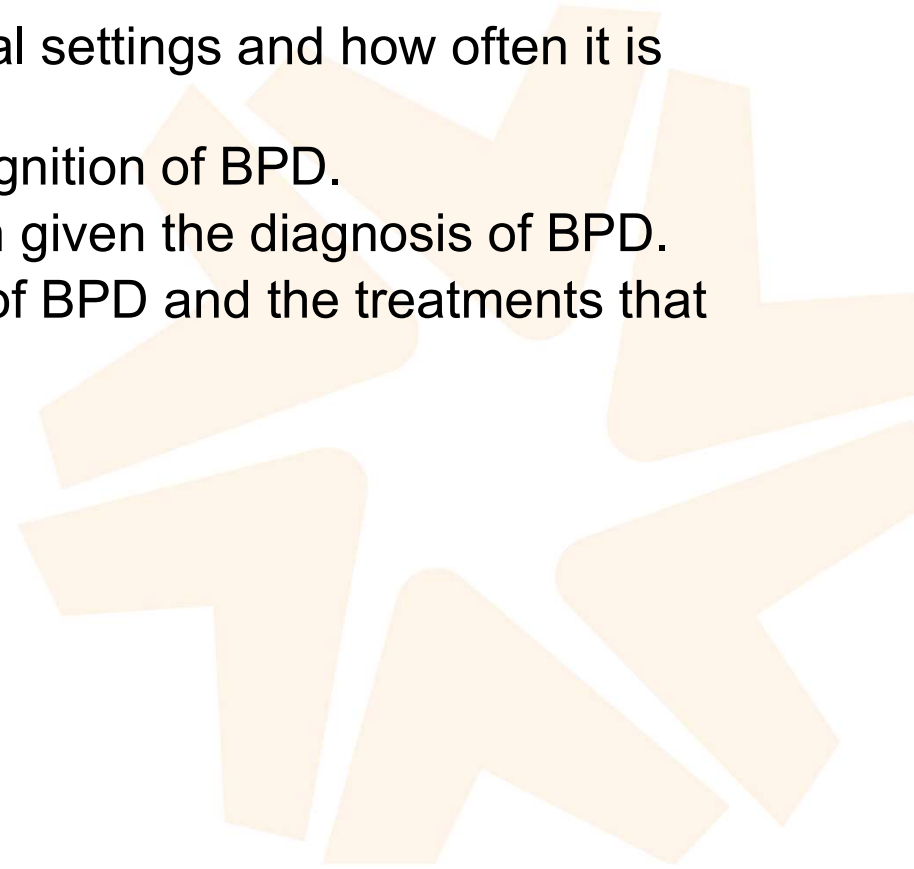
Google Search Oct 3, 2023

🕒 is borderline - Google Search ×

- 🔍 is borderline **personality disorder**
- 🔍 is borderline **personality disorder a disability**
- 🔍 is borderline **personality disorder the same as bipolar**
- 🔍 is borderline **personality disorder a mood disorder**
- 🔍 is borderline **personality disorder a mental illness**
- 🔍 is borderline **personality disorder curable**
- 🔍 **is borderline personality disorder real**

Learning Objectives

- Describe the frequency of BPD in the clinical settings and how often it is underrecognized and underdiagnosed.
- Identify screening tools to improve the recognition of BPD.
- Recognize how patients are impacted when given the diagnosis of BPD.
- Discuss studies on the longitudinal course of BPD and the treatments that have empirical support.



Underdiagnosis and Prevalence of BPD in Clinical Practice



Underdiagnosis of Borderline Personality Disorder

- 500 patients evaluated by psychiatrists with an unstructured interview
- separate sample of 409 administered Structured Clinical Interview for DSM-IV Personality (SIDP-IV)
 - more borderline PD diagnoses made on SIDP-IV
 - 14.4% vs. 0.4%
 - when SIDP-IV information presented to clinicians more BPD diagnoses were made
 - 9.2% vs. 0.4%

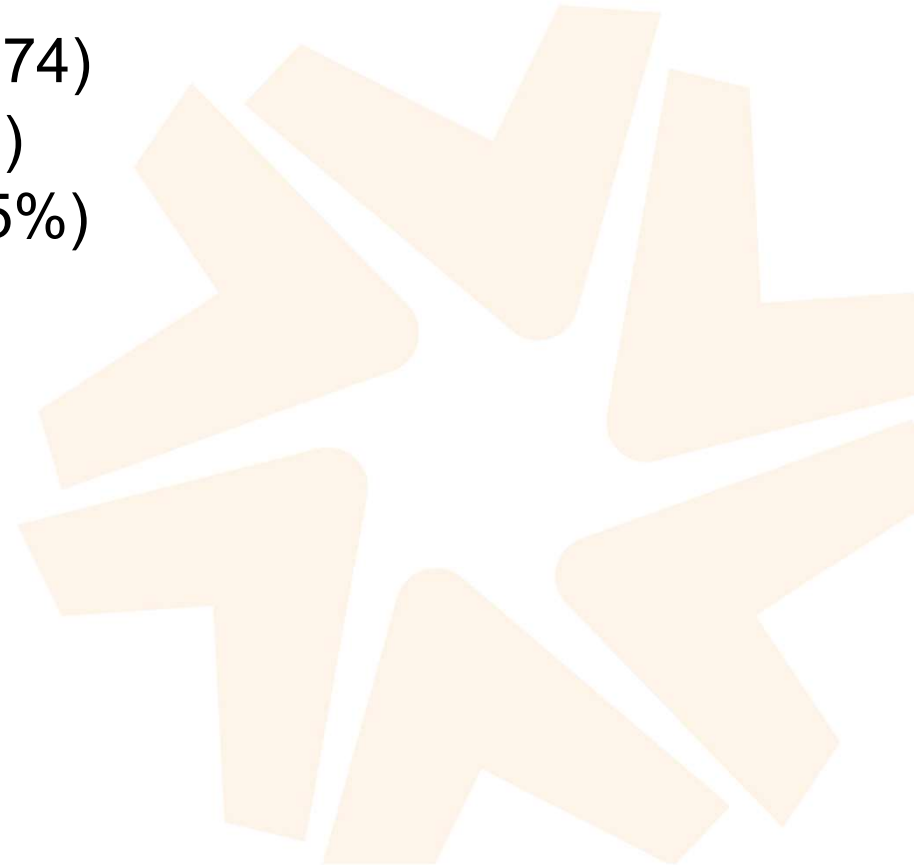
Prevalence of BPD in Outpatient Clinical Setting

- Largest clinical epidemiology study—Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project
- Sample: 3674 psychiatric outpatients
 - Gender: 60.2% female, 39.8% male
 - Mean age: 38.8 years
- Method of assessment
 - Semi-structured interview (SIDP-IV)

SIDP-IV = Structured Interview for *DSM-IV* Personality.
Zimmerman M, et al. *Ann Clin Psychiatry*. 2017;29(1):54-60.

Prevalence of BPD in an Outpatient Setting

- Results
 - Overall prevalence: 10.6% (390/3674)
 - Principal diagnosis: 80/390 (20.5%)
 - Comorbid diagnosis: 310/390 (79.5%)



Prevalence of BPD in a Partial Hospital Setting

- Largest clinical epidemiology study—Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project
- Sample: 2070 partial hospital patients
- Method of assessment
 - Semi-structured interview (SIDP-IV)

Results

Prevalence of BPD: 17.9%

Conclusions

1. BPD is relatively frequent.
2. BPD is more frequent in settings of greater treatment intensity.
3. BPD is frequently underrecognized.



Screening



A Maxim about Screening

“All screening programs do harm; some do good as well”

Risks of Screening

Overdiagnosis

Overtreatment



A Cautionary Tale

Ms. Doren is a 51-year-old, twice-divorced, cisgender white female who was referred by her outpatient therapist because of worsening symptoms of depression and anxiety in relation to being fired from her job. Ms. Doren reported prior episodes of depression, the most recent of these periods occurring 3 years ago after another job loss. She met criteria for major depressive disorder. She denied suicidal ideation and a history of suicide attempts.

A Cautionary Tale

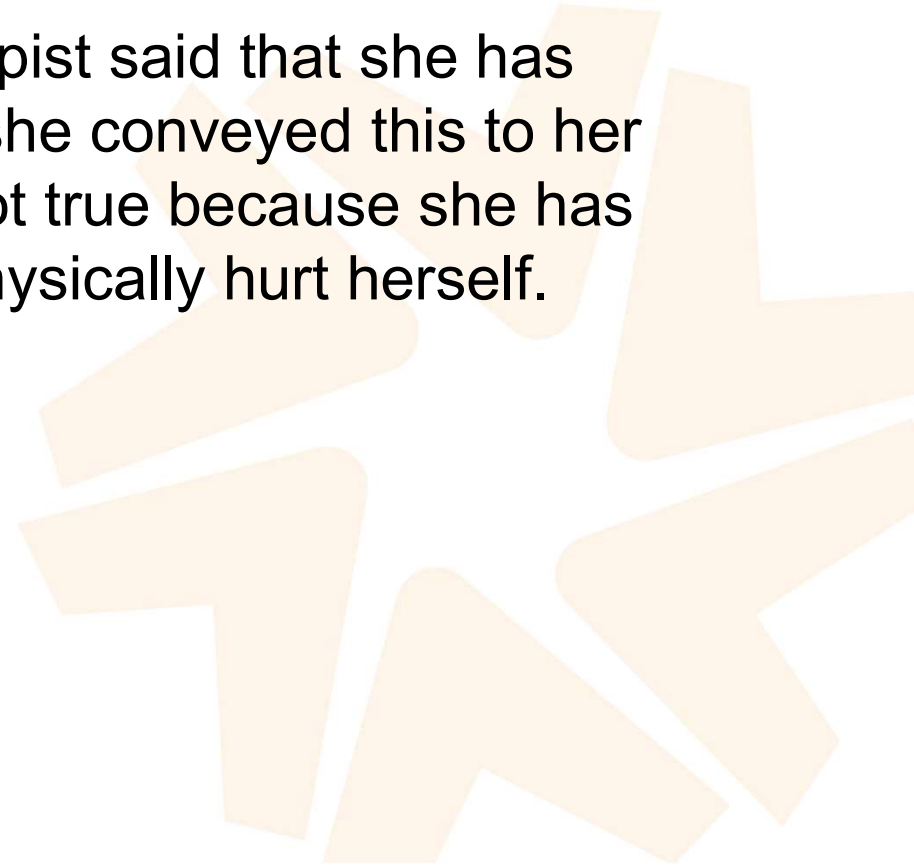
Ms. Doren stated that “all” of her relationships are “intense,” with many ups and downs, including with her romantic partners, friends, and family. She “thinks with my emotions,” which has made interpersonal relationships difficult. She often switches from loving feelings to hating people, mostly when she is ignored by people or “provoked.” She reported an “enormous fear of abandonment,” and stated that she will “send 100 texts, I’ve offered sex, to change my personality, I’ve taken responsibility for things that I didn’t do wrong,” to keep people from leaving her. She reported feeling empty much of the time (“something is missing from my life”). She also endorsed having significant “issues about what my identity is tied to,” stating that she often ties her identity to things such as her husband or job, and she experiences an “identity crisis” if these things are no longer present (“I don’t know who me is,” “I was Gail’s mom, I was Bob’s wife”).

A Cautionary Tale

She also reported that she often operates under a “persona,” and she finds it difficult to separate this persona from her actual personality. Ms. Doren reported occasional anger, stating that she gets “irritated easily,” and that this anger can last for a long time (“months, in the past”). Finally, Ms. Doren reported engaging in impulsive behaviors, such as frequently shopping and having 12-15 brief sexual affairs in the past 5 years.

A Cautionary Tale

Ms. Doren said her ex-husband's therapist said that she has borderline personality disorder. When she conveyed this to her therapist, her therapist said that was not true because she has never been suicidal, and she did not physically hurt herself.



What Errors Did Ms. Doren's Therapist Make?

- Gate criterion



BPD Criteria: 5 of 9

1. Avoid abandonment
2. Unstable relationships
3. Identity disturbance
4. Impulsivity
5. Suicidality/self-injury
6. Affective instability
7. Emptiness
8. Anger
9. Stress-induced paranoia/dissociation

What Errors Did Ms. Doren's Therapist Make?

- Gate criterion
- Confusion about sensitivity
- Lack of understanding about predictive value

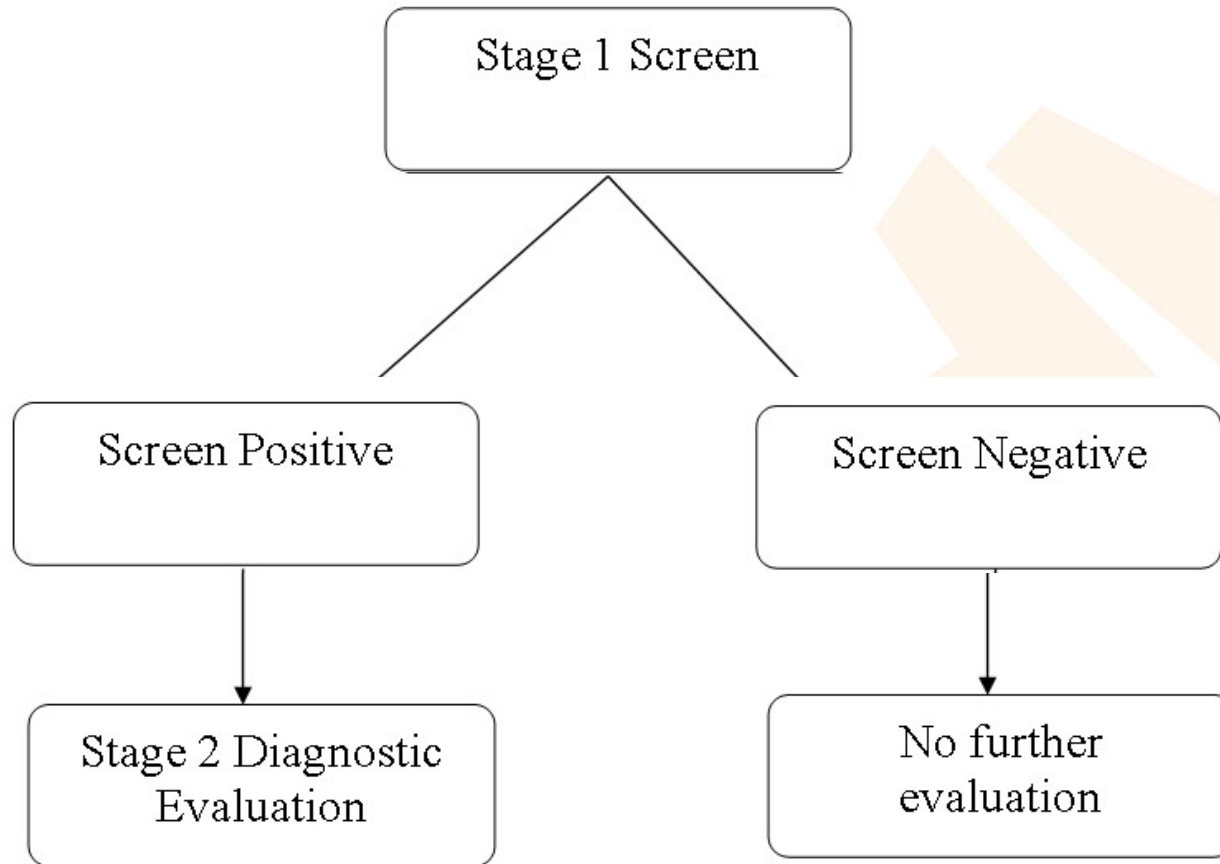


Statistics of Screening





The 2-Stage Diagnostic Process



Brief Review of the Statistics of Screening

		Gold Standard Diagnosis		Total
		Present	Absent	
Screening Test	Positive	a	b	<u>a+b</u>
	Negative	c	d	<u>c+d</u>
Total		a + c	b + d	

Brief Review of the Statistics of Screening

		Gold Standard Diagnosis		Total
		Present	Absent	
Screening Test	Positive	a	b	<u>a+b</u>
	Negative	c	d	<u>c+d</u>
Total		<u>a + c</u>	b + d	

$$\text{Sensitivity} = a / (a+c)$$

$$\text{Specificity} = d / (b+d)$$

$$\text{Positive Predictive Value} = a / (a+b)$$

$$\text{Negative Predictive Value} = d / (c+d)$$

Brief Review of the Statistics of Screening

		Gold Standard Diagnosis		Total
		Present	Absent	
Screening Test	Positive	a	b	<u>a+b</u>
	Negative	c	d	<u>c+d</u>
Total		a + c	b + d	

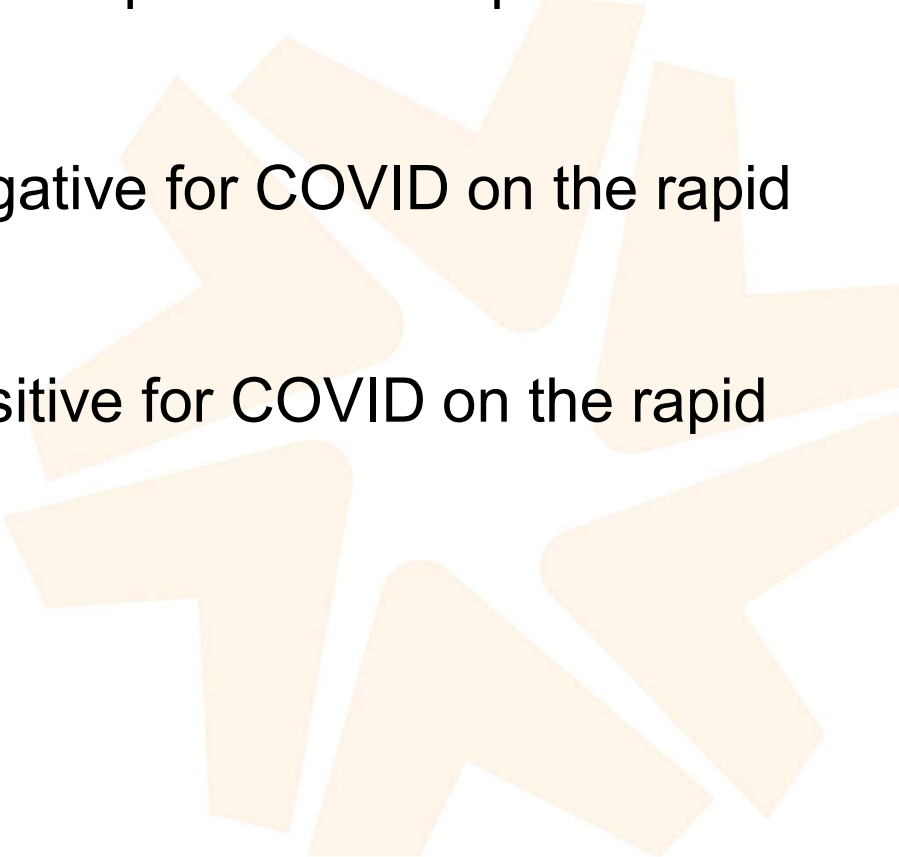
$$\text{Sensitivity} = a / (a+c)$$

$$\text{Specificity} = d / (b+d)$$

$$\text{Positive Predictive Value} = a / (a+b)$$

$$\text{Negative Predictive Value} = d / (c+d)$$

Screening for COVID-19

- How many individuals with COVID screen positive on rapid screening test?
 - Sensitivity
 - How many individuals who screen negative for COVID on the rapid screening test do not have COVID?
 - Negative predictive value
 - How many individuals who screen positive for COVID on the rapid screening test have COVID?
 - Positive predictive value
- 

Positive Predictive Value:

A Clinician's Guide to Avoid Misinterpreting the Results of Screening Tests

Mark Zimmerman, MD^{a,b,*}

A Hypothetical

- A screening test for schizophrenia has been developed and it is being studied in the general population where the prevalence of schizophrenia is 1%. Assume the screening test has a sensitivity of 100% and a specificity of 95%. What is the approximate likelihood that a person who screens positive on the test has schizophrenia?
 - 15%
 - 35%
 - 55%
 - 75%
 - 90%

ECT Response and BPD

Treatment Outcomes of Electroconvulsive Therapy for Depressed Patients With and Without Borderline Personality Disorder: A Retrospective Cohort Study

Agustin G. Yip, MD, PhD^{a,*}; Kerry J. Ressler, MD, PhD^a;
Fernando Rodriguez-Villa, MD^a; Shan H. Siddiqi, MD^b; and Steven J. Seiner, MD^a

ECT = electroconvulsive therapy.

Yip AG, et al. *J Clin Psychiatry*. 2021;82(2):19m13202.



ECT Response and BPD

- Patients
 - 693 depressed patients who received ECT
- Methods
 - Patients completed the McLean Screening Instrument for BPD
 - Patients completed Quick Inventory of Depressive Symptoms
- Result
 - 145 (20.9%) patients screened positive for BPD
 - No difference in outcome between patients who did and did not screen positive
- Conclusion
 - The data “provides the clinician with a rationale for proceeding with ECT among depressed patients, notwithstanding comorbid BPD”.

Problem with the Study of ECT Response and BPD

- BPD was “diagnosed” with a screening scale
- No mention of positive predictive value
- Meta-analysis of 9 studies of the MSI-BPD
 - Sensitivity 81.7%
 - Specificity 63.2%
- Based on a prevalence of BPD of 20.9% – we can compute positive predictive value

MSI-BPD = McLean Screening Instrument for Borderline Personality Disorder.

Zimmerman M, et al. *J Pers Disord.* 2021;35(2):288-298. Zimmerman M. *J Clin Psychiatry.* 2021;82(2):21com13909. Feske U, et al. *Am J Psychiatry.* 2004;161:2073-2080.

Problem with the Study of ECT Response and BPD – Statistics

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		A+C	B+D	n

Problem with the Study of ECT Response and BPD – Statistics

- We know overall sample size is 693

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		A+C	B+D	n

Problem with the Study of ECT Response and BPD – Statistics

- We know overall sample size is 693

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		A+C	B+D	693

Problem with the Study of ECT Response and BPD – Statistics

- We know prevalence of BPD based on McLean Screening Instrument (n=145)

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		A+C	B+D	693

Problem with the Study of ECT Response and BPD – Statistics

- We know prevalence of BPD based on McLean Screening Instrument (n=145)

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		145	B+D	693

Problem with the Study of ECT Response and BPD – Statistics

- We can calculate number of patients without BPD (B+D): 693-145

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		145	B+D	693

Problem with the Study of ECT Response and BPD – Statistics

- We can calculate number of patients without BPD (B+D): $693-145=548$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- From the meta-analysis the scale has a sensitivity of 81.7%, we can therefore calculate the number of patients in cell A: $(.817)(145)$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	A	B	A+B
	Negative	C	D	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- From the meta-analysis the scale has a sensitivity of 81.7%, we can therefore calculate the number of patients in cell A: $(.817)(145)=118$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	B	A+B
	Negative	C	D	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- We can then calculate number of patients in cell C: 145-118

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	B	A+B
	Negative	C	D	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- We can then calculate number of patients in cell C: $145-118=27$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	B	A+B
	Negative	27	D	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- Based on the meta-analysis the specificity of the scale was 63.2%, we can therefore calculate the number of patients in cell D: $(.632)(548)$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	B	A+B
	Negative	27	D	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- Based on the meta-analysis the specificity of the scale was 63.2%, we can therefore calculate the number of patients in cell D: $(.632)(548)=346$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	B	A+B
	Negative	27	346	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- We can then calculate number of patients in cell B: 548-346

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	B	A+B
	Negative	27	346	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- We can then calculate number of patients in cell B: $548-346=202$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	202	A+B
	Negative	27	346	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- We can then calculate A+B:118+202

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	202	A+B
	Negative	27	346	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- We can then calculate A+B:118+202=320

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	202	320
	Negative	27	346	C+D
		145	548	693

Problem with the Study of ECT Response and BPD – Statistics

- We now can calculate positive predictive value: $118/320 = 36.9\%$

Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	118	202	320
	Negative	27	346	C+D
		145	548	693

Problem with the Study of ECT Response and BPD

- BPD was “diagnosed” with a screening scale
- No mention of positive predictive value
- Meta-analysis of 9 studies of the MSI-BPD
 - Sensitivity 81.7%
 - Specificity 63.2%
- Based on a prevalence of BPD of 20.9%
 - Positive predictive value of the McLean Screening Instrument for BPD is 36.9%
- Based on a prevalence of BPD of 14%
 - Positive predictive value of the McLean Screening Instrument for BPD is 26.5%

Misuse of Screening Scales: Answer to the Hypothetical

- A screening test for schizophrenia has been developed and it is being studied in the general population where the prevalence of schizophrenia is 1%. Assume the screening test has a sensitivity of 100% and a specificity of 95%. What is the chance that a person who screens positive on the test has schizophrenia?
- Positive predictive value – 16.7%

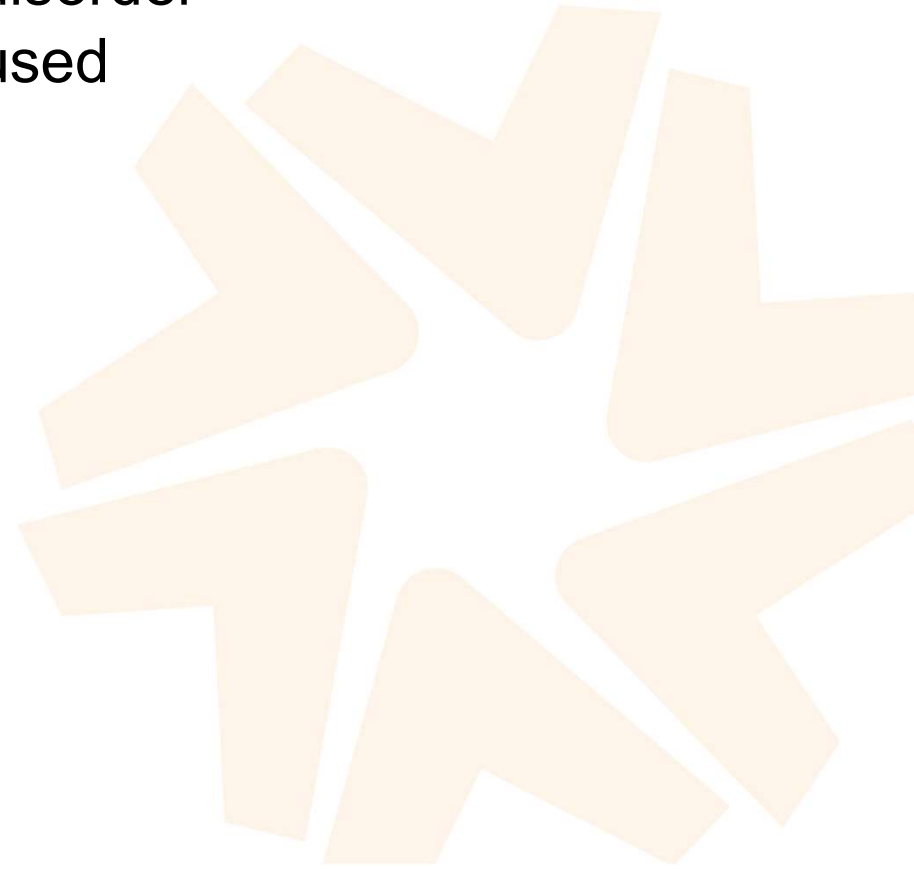
Gold Standard Diagnosis				
		Positive	Negative	
Screening Test	Positive	10	50	60
	Negative	0	940	940
		10	990	1000

Screening for Borderline Personality Disorder in Clinical Practice



Screening for BPD in Clinical Practice

- Screening for borderline personality disorder
 - Screening questionnaires are not used
 - Polythetically defined criteria

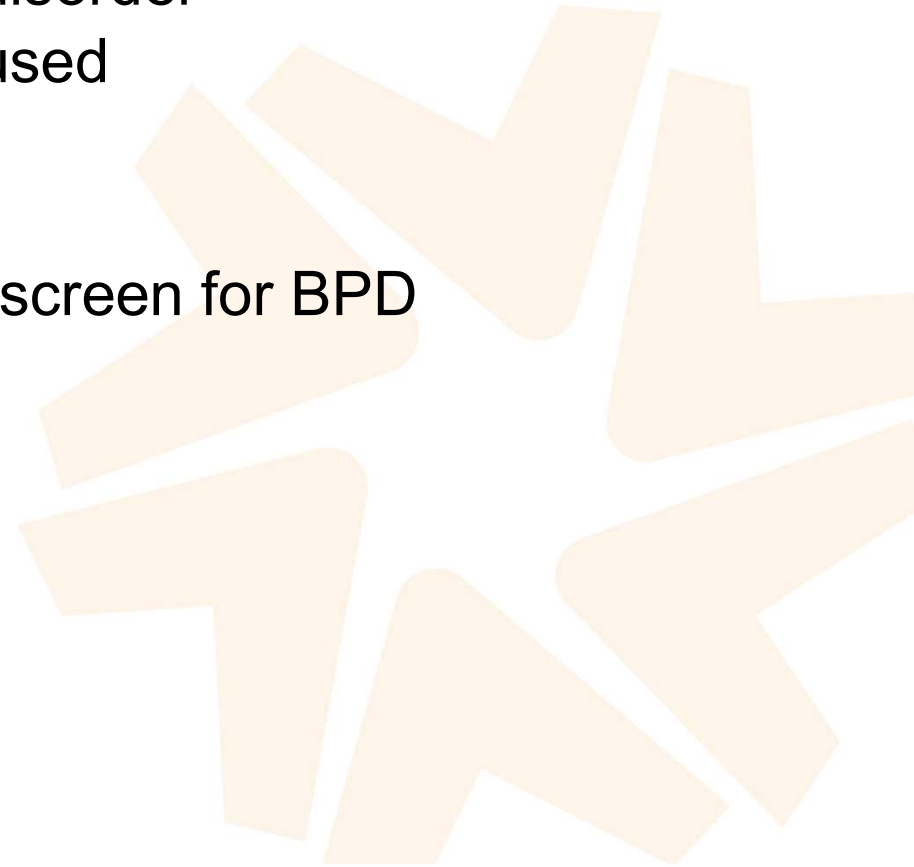


BPD Criteria: 5 of 9

1. Avoid abandonment
2. Unstable relationships
3. Identity disturbance
4. Impulsivity
5. Suicidality/self-injury
6. Affective instability
7. Emptiness
8. Anger
9. Stress-induced paranoia/dissociation

Screening for BPD in Clinical Practice

- Screening for borderline personality disorder
 - Screening questionnaires are not used
 - Polythetically defined criteria
 - Psychiatric review of systems
- Can a “gate criterion” be identified to screen for BPD
 - High sensitivity
 - High negative predictive value



Short report

Clinically useful screen for borderline personality disorder in psychiatric out-patients

Mark Zimmerman, Matthew D. Multach, Kristy Dalrymple and Iwona Chelminski

Which Criterion?

1. Avoid abandonment
2. Unstable relationships
3. Identity disturbance
4. Impulsivity
5. Suicidality/self-injury
6. Affective instability
7. Emptiness
8. Anger
9. Stress-induced paranoia/dissociation

Analysis of the MIDAS Project Data

- 3674 psychiatric outpatients
 - 60.2% female
 - 87.1% white
 - 38.8 years
- Semi-structured interview
 - BPD section of the SIDP-IV

MIDAS = Rhode Island Methods to Improve Diagnostic Assessment and Services. SIDP-IV = Structured Interview for DSM-IV Personality. Zimmerman M, et al. *Br J Psychiatry*. 2017;210(2):165-166.

Results

	Sensitivity	Specificity	Positive Predictive Value	Negative Predictive Power
Odd-even split				
Validation sample (n=1,837)	94.3%	81.6%	37.5%	99.2%
Cross-validation sample (n=1,837)	91.4%	82.3%	38.2%	98.8%
Temporal split				
First third (n=1,225)	92.5%	76.9%	32.8%	98.8%
Middle third (n=1,225)	91.5%	83.7%	39.7%	98.8%
Last third (n=1,224)	94.5%	85.1%	42.6%	99.3%
All Patients (n=3,674)	92.8%	81.9%	37.9%	99.0%

Which Criterion?

1. Avoid abandonment
2. Unstable relationships
3. Identity disturbance
4. Impulsivity
5. Suicidality/self-injury
6. Affective instability
7. Emptiness
8. Anger
9. Stress-induced paranoia/dissociation



Which Criterion?

1. Avoid abandonment
2. Unstable relationships
3. Identity disturbance
4. Impulsivity
5. Suicidality/self-injury
6. **Affective instability**
7. Emptiness
8. Anger
9. Stress-induced paranoia/dissociation



Assessing Affective Instability

SIDP-IV questions

Has anyone ever told you that your moods seem to change a great deal?

IF YES: What did they say?

Do you often have days when your mood changes a great deal—days when you shift back and forth from feeling like your usual self, to feeling angry or depressed or anxious?

IF YES: How intense are your mood swings?

How often does this happen in a typical week?

How long do the moods last?

Other Studies of the Sensitivity and Negative Predictive Value of the Affective Instability Criterion

Author	Sample	Sensitivity	NPV
Farmer and Chapman (2002)	149 “symptomatic volunteers”	92%	98%
Grilo et al (2004)	130 Hispanic substance abusers	97%	98%
Grilo et al (2001)	668 CLPS study	94%	90%
Korfine and Hooley (2009)	45 hospitalized and community BPD	91%	---
Leppänen et al (2013)	71 BPD patients in psychotherapy trial	89%	---
Nurnberg et al (1991)	100 psychiatric outpatients	100%	100%
Pfohl et al (1986)	131 psychiatric patients	93%	97%
Reich et al (1990)	159 psychiatric outpatients	97%	99%

CLPS = Collaborative Longitudinal Personality Disorders Study.

Farmer RF, et al. *Compr Psychiatry*. 2002;43(4):285-300. Grilo CM, et al. *J Consult Clin Psychol*. 2004;72(1):126-131. Grilo CM, et al. *Acta Psychiatr Scand*. 2001;104:264-272. Korfine L, et al. *J Pers Disord*. 2009;23(1):62-75. Leppänen V, et al. *Nord J Psychiatry*. 2013;67(5):312-319. Nurnberg HG, et al. *Am J Psychiatry*. 1991;148(10):1371-1377. Pfohl B, et al. *Compr Psychiatry*. 1986;27(1):21-34. Reich J, et al. *Ann Clin Psychiatry* 1990;2(3):189-197.

Assessing Other BPD Criteria



Assessing Other BPD Criteria

Interview Guide for Evaluating DSM-5
Psychiatric Disorders and the Mental
Status Examination

Mark Zimmerman, M.D.

Psych Products Press



Assessing Other BPD Criteria

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BORDERLINE PERSONALITY DISORDER

Inclusion: at least 5 criteria
Exclusion: None

A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by 5 or more of the following:

(1) Frantic efforts to avoid real or imagined abandonment. [Do not include suicidal or self-mutilating behavior covered in criterion 5].

Have there been times when you've been very upset, almost to the point of being distraught, because you thought someone you loved or needed very much might leave you?

IF YES: How often has this happened?

What did you do to keep them from leaving?

IF ONLY SUICIDAL/SELF-MUTILATING BEHAVIOR:

What else have you done?

Do you spend a lot of time thinking about ways to keep people from leaving you?

(2) A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.

Do your relationships with friends and lovers tend to be intense and stormy with lots of ups and downs?

IF YES: Can you tell me about some of them?

With some people do you switch from loving, respecting, and admiring them at one time, to despising them at another time?

IF YES: Tell me about that.

(3) Identity disturbance: markedly and persistently unsteady self-image or sense of self.

Does the way you think about yourself change so often that you don't know who you are? **IF YES:** Tell me about this.

Do you ever feel like you're someone else, or that you're evil, or maybe that you don't even exist? **IF YES:** Tell me about that.

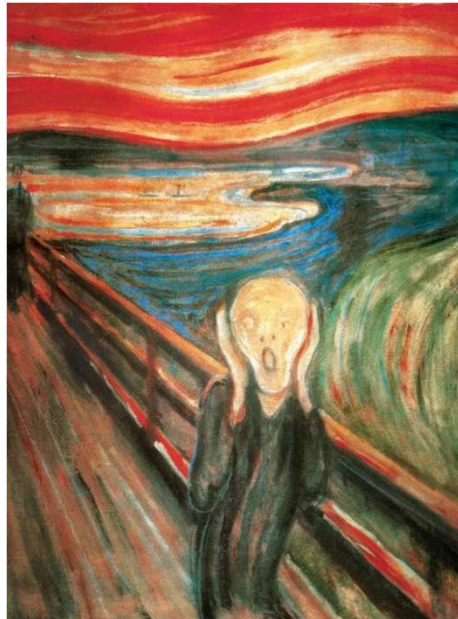


Telling Patients They Have BPD



The Issue

Many clinicians state they are hesitant to discuss the diagnosis of BPD with their patients due to concerns about patients' negative reactions to being so diagnosed



Zimmerman M, et al. *Ann Clin Psychiatry*. 2018;30(3):215-219.

The Question

Are patients with BPD less satisfied/more upset with the initial evaluation than patients without BPD?



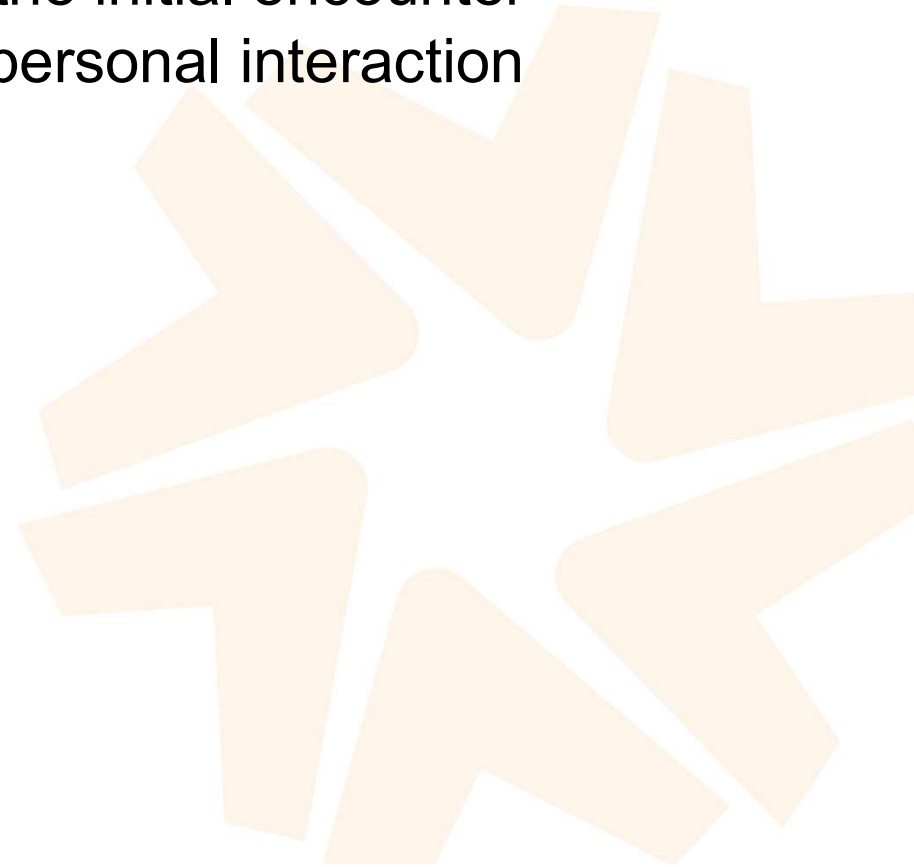
The Sample

- MIDAS project
- 1093 patients presenting to the Rhode Island Hospital partial hospital program
 - 35.1% men, 62.7% women, 2.2% transgender
 - Mean age = 36.8 years
 - 29.7% graduated college
 - 75.5% white, 6.5% black, 10.1% Hispanic
 - 15.6% BPD, 56.6% MDD, 43.2% GAD, 26.0% PTSD

MDD = major depressive disorder; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder.
Zimmerman M, et al. *Ann Clin Psychiatry*. 2018;30(3):215-219.

The Measure: Clinically Useful Patient Satisfaction Scale (CUPSS)

- Designed to assess satisfaction with the initial encounter
- Focus on clinician behavior and interpersonal interaction
- Global rating of satisfaction
- Items are rated on a 5-point scale



The Results

- Mean scores on the items differed in the BPD and non-BPD patients by two-tenths of a point, or less, on the 5-point scale
- Extremely satisfied with the initial evaluation
 - (74.9% vs 75.1%, $\chi^2 = .003$, ns)
- Diagnosis was explained in a clear way (strongly agree)
 - (76.0% vs 80.6%, $\chi^2 = 1.87$, ns)

ns = not significant.

Zimmerman M, et al. *Ann Clin Psychiatry*. 2018;30(3):215-219.

Conclusions

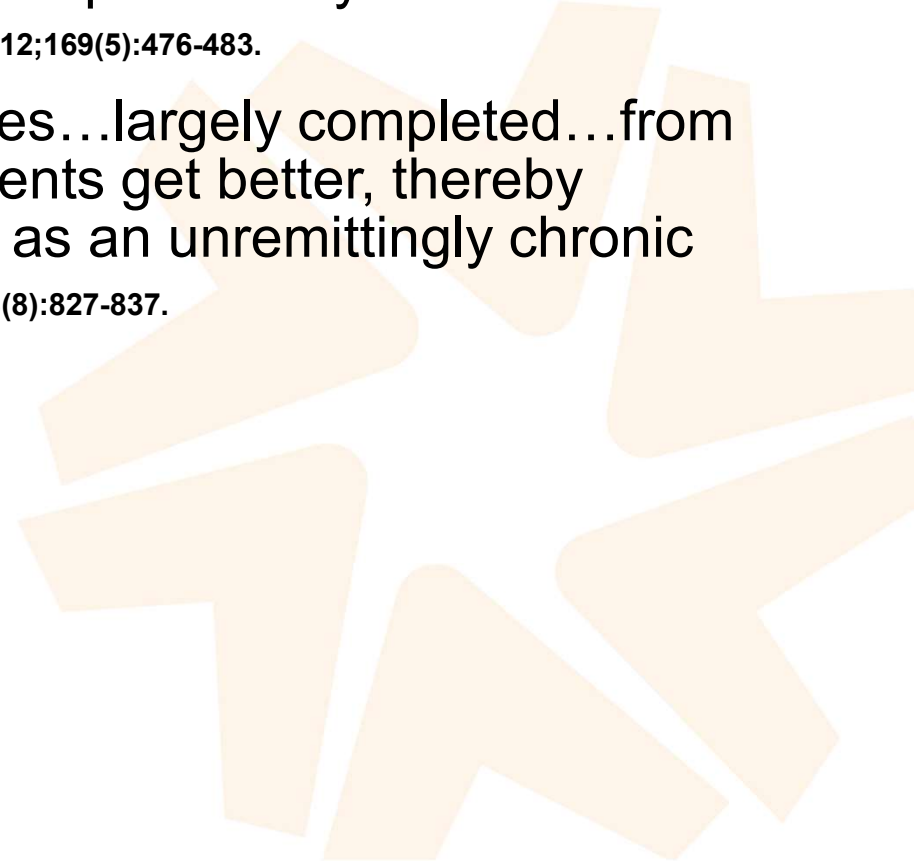
1. Patients with BPD do not differ from other patients in their satisfaction with the initial evaluation
2. The patients with BPD were as likely to indicate that their diagnosis was explained in a clear way, perceive their doctors as being interested in them, and believe that their doctors understood their problems
3. Clinicians should approach the diagnosis of BPD in the same way that they make other psychiatric diagnoses

Longitudinal Course of BPD



Clinician Beliefs

- “Many clinicians still believe that borderline personality disorder is a chronic disorder.” Zanarini MC, et al. *Am J Psychiatry*. 2012;169(5):476-483.
- “...seminal long-term retrospective studies...largely completed...from 1985 to 1995, indicated that...many patients get better, thereby challenging the widely held view of BPD as an unremittingly chronic condition.” Gunderson JG, et al. *Arch Gen Psychiatry*. 2011;68(8):827-837.



Prospective Longitudinal Studies

- McLean Study of Adult Development (MSAD)
- Collaborative Longitudinal Personality Disorders Study (CLPS)

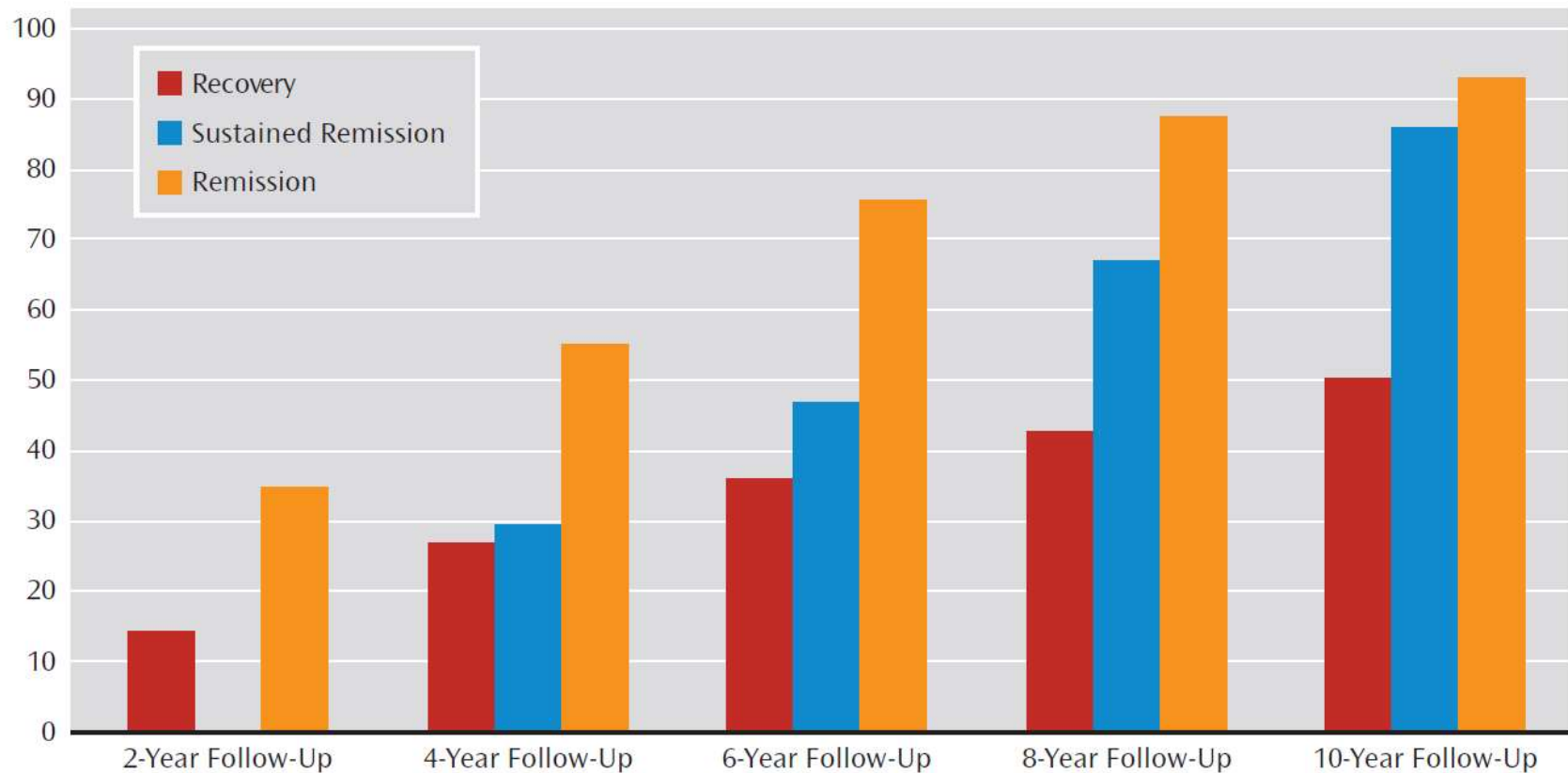
MSAD

- Sample
 - 290 inpatients at McLean Hospital with BPD age 18–35 years
 - 72 inpatient controls with other personality disorders
- Methods
 - Interview every 2 years with semi-structured interviews for up to 16 years
 - Follow-up success rate: 92% of surviving patients at 10 years
- Definitions
 - Remission: Not meeting BPD criteria for 2 years
 - Sustained remission: Not meeting BPD criteria for at least 4 years
 - Recovery: GAF \geq 61
 - At least 1 emotionally sustaining relationship
 - Work or school consistently on a full-time basis

GAF = Global Assessment of Functioning.

Zanarini MC, et al. *Am J Psychiatry*. 2010;167(6):663-667.

Time to Attainment of Remission, Sustained Remission, and Recovery from BPD



Zanarini MC, et al. *Am J Psychiatry*. 2010;167(6):663-667.

MSAD: Cumulative Recovery Rates over 16 Years of Follow-up

	Recovery
Year 2	27%
Year 4	36%
Year 8	43%
Year 10	47%
Year 12	50%
Year 14	56%
Year 16	60%

Zanarini MC, et al. *Am J Psychiatry*. 2012;169(5):476-483.

CLPS

- Sample
 - 175 patients with BPD at 4 sites (Brown, Columbia, Harvard, Yale)
 - Age 18–45 years
- Methods
 - Interview every 2 years with semi-structured interviews for up to 10 years
 - Follow-up success rate: 63% of surviving patients at 10 years
- Definitions
 - Remission: ≤ 2 BPD criteria for 1 year

CLPS: Cumulative Remission Rates

	Remission (\leq 2 BPD criteria)	Functional Remission (GAF > 70 for 2 months)
Year 2	29%	5%
Year 4	51%	10%
Year 6	66%	13%
Year 10	85%	21%

Conclusions

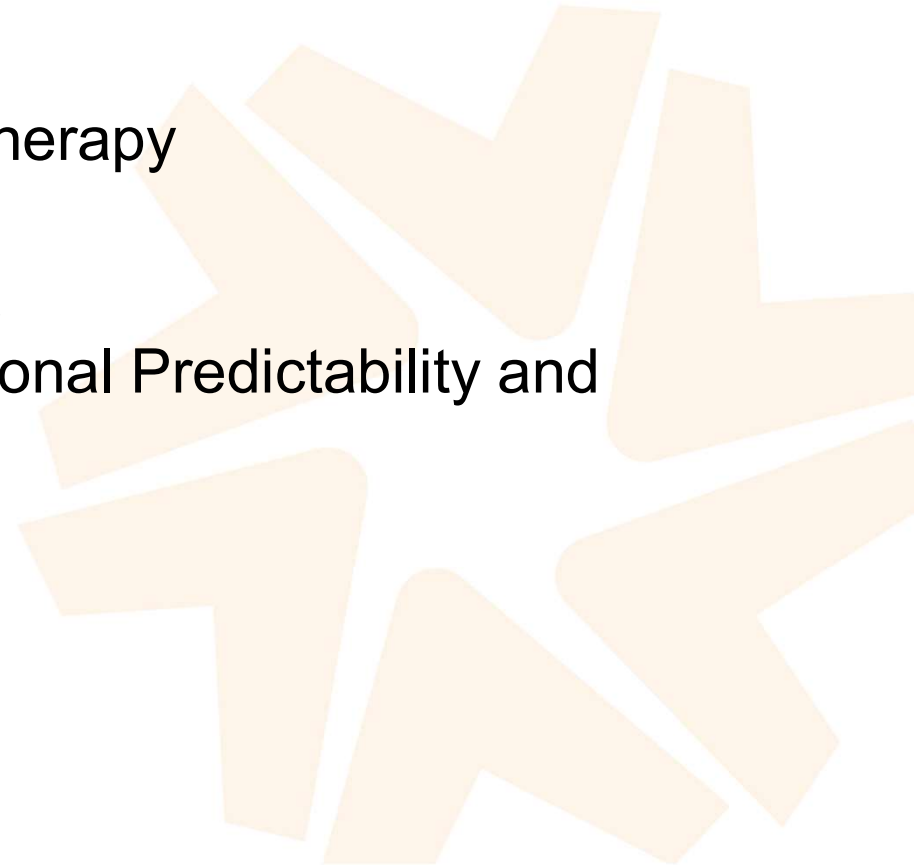
1. The longitudinal course of BPD is heterogeneous
2. The rate of remission depends, in part, on how remission is defined
3. The vast majority of patients with BPD remit symptomatically. Thus, there is cause for optimism
4. Functional remission is less likely than symptomatic remission. However, many patients with BPD achieve satisfactory–good functional remission during a 10-year follow-up

Treatment of BPD: Psychotherapy



Psychotherapy for BPD: More Than DBT

- DBT: Dialectical Behavior Therapy
- MBT: Mentalization-Based Therapy
- TFP: Transference-Focused Psychotherapy
- SFT: Schema-Focused Therapy
- GPM: Good Psychiatric Management
- STEPPS: Systems Training for Emotional Predictability and Problem Solving

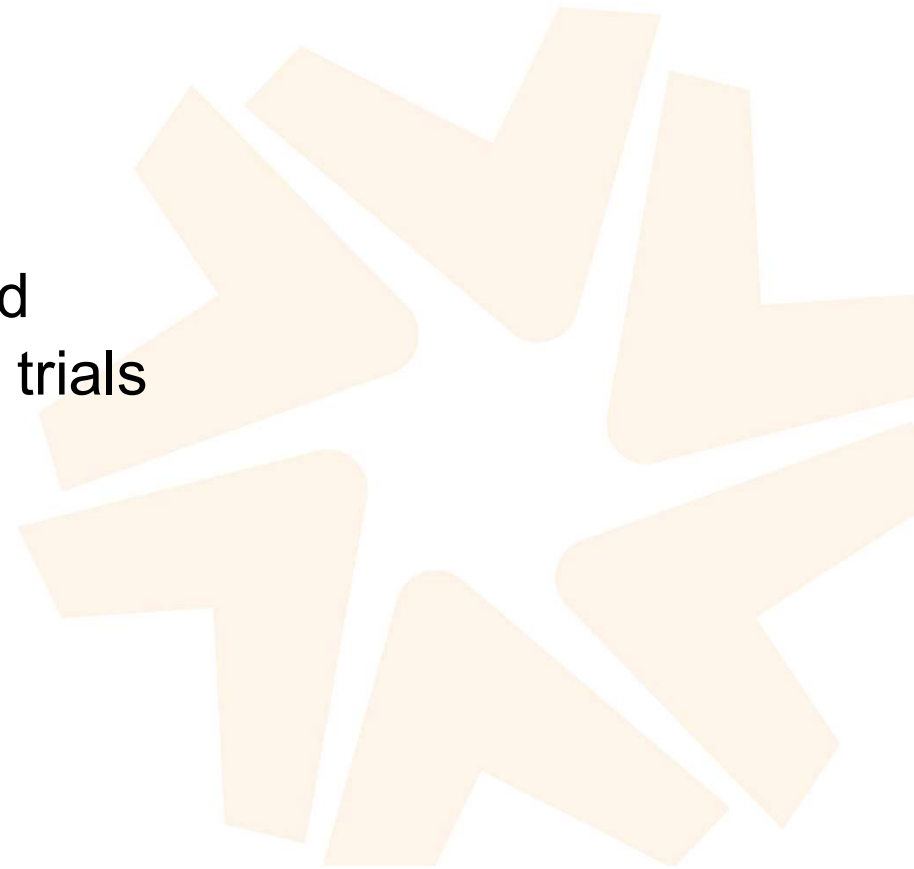


Meta-Analysis of Efficacy of Psychotherapy for BPD

- 33 trials
 - 2256 participants
- 22 stand-alone, 11 add-on
- 12 DBT, 8 psychodynamic, 5 CBT
- Control group: 21 TAU, 10 manualized
- Treatment developer involvement: 20 trials

TAU = treatment as usual.

Cristea IA, et al. *JAMA Psychiatry*. 2017;74(4):319-328.



Meta-Analysis of Efficacy of Psychotherapy for BPD

Variable	Stand-alone Design				Add-on Design				P Value ^b
	No. of Trials	Hedges <i>g</i> (95% CI) ^a	NNT	<i>I</i> ² (95% CI), %	No. of Trials	Hedges <i>g</i> (95% CI) ^a	NNT	<i>I</i> ² (95% CI), %	
Posttest									
Borderline-relevant outcomes ^c	17	0.32 (0.14 to 0.51)	5.56	49 (0 to 69)	10	0.40 (0.15 to 0.65)	4.50	50 (0 to 74)	.63
Borderline symptoms	10	0.31 (0.04 to 0.57)	5.75	62 (3 to 79)	8	0.56 (0.15 to 0.97)	3.25	76 (43 to 87)	.30
Self-harm and parasuicidal behavior	13	0.32 (0.09 to 0.54)	5.56	55 (0 to 75)	6	0.24 (-0.07 to 0.55)	7.46	41 (0 to 75)	.68
Suicide	10	0.44 (0.15 to 0.74)	4.10	60 (0 to 78)	3	0.35 (0.02 to 0.68)	5.10	10 (0 to 75)	.67
Health service use	13	0.40 (0.22 to 0.58)	4.50	22 (0 to 59)	3	0.16 (-0.13 to 0.46)	11.11	5 (0 to 74)	.17
General psychopathology, anxiety, and depression	13	0.32 (0.09 to 0.55)	5.56	62 (18 to 78)	10	0.53 (0.24 to 0.82)	3.42	62 (4 to 79)	.25

Cristea IA, et al. *JAMA Psychiatry*. 2017;74(4):319-328.

Meta-Analysis of Efficacy of Psychotherapy for BPD

Variable	Stand-alone Design				Add-on Design				P Value ^b
	No. of Trials	Hedges <i>g</i> (95% CI) ^a	NNT	<i>I</i> ² (95% CI), %	No. of Trials	Hedges <i>g</i> (95% CI) ^a	NNT	<i>I</i> ² (95% CI), %	
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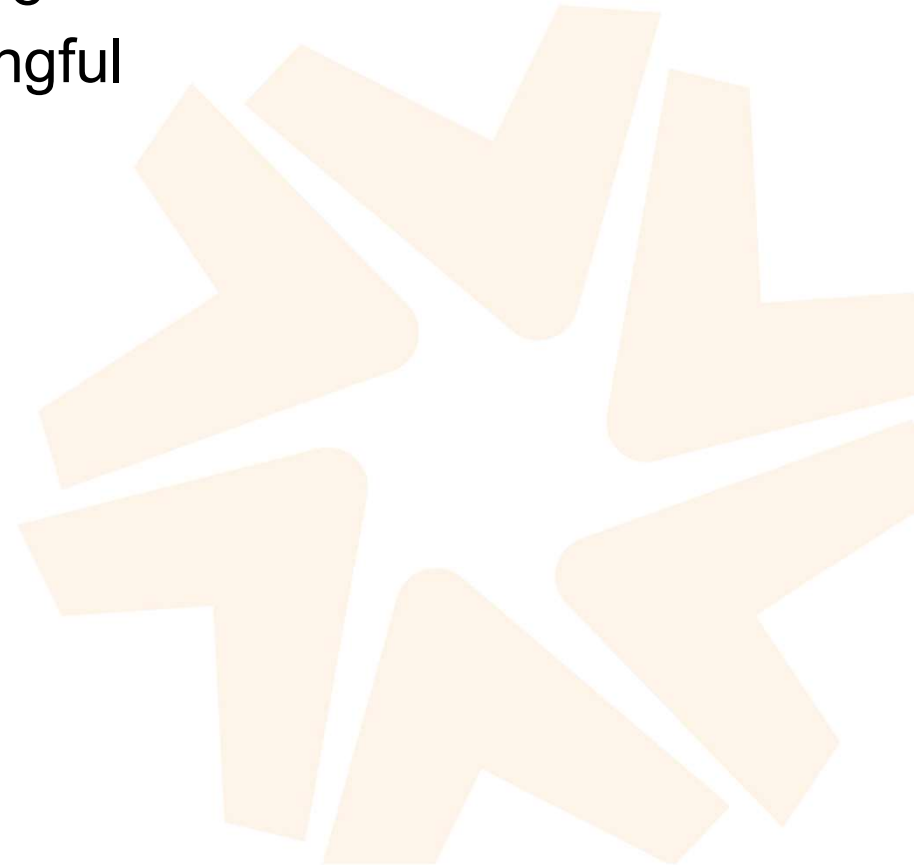
Meta-Analysis of Efficacy of Psychotherapy for BPD: Subgroup Analyses

- Type of therapy
 - CBT: Hedges $g=.24$ (ns)
 - DBT: Hedges $g=.34$
 - Psychodynamic therapy: Hedges $g=.41$



Meta-Analysis of Efficacy of Psychotherapy for BPD: Conclusions

- Various therapies for BPD are effective
- Effects are small, but clinically meaningful



The Cost of Therapy for BPD

- Review of 30 economic evaluations of therapy for BPD
- Mean cost-saving per patient per year: \$2987.82
- Mean cost-saving compared to treatment as usual: \$1551

Treatment of BPD: Medication



4 Facts about the Pharmacotherapy of BPD

1. No medication has been approved for BPD anywhere in the world
2. Almost all patients with BPD are treated with psychotropic medication
3. Polypharmacy is the rule, rather than the exception
4. A variety of medications are prescribed

Summary of Studies of Pharmacotherapy in Clinical Practice

Author	Year	Tx	Mean	3+	AP	AD	Mood Stabilizer	Sed/Hypnotic
Zanarini	2001	Inpt		45				
Sansone	2003	Outpt	1.9		8	82	18	28
Pascual	2010	Inpt	2.7	57	34.5	79.2	44.2	73.5
Bridler	2015	Inpt	2.8	54				
Moeller	2016	Inpt	3.2		47.1	64.7	37.6	68.2
Paolino	2017	Inpt			78.7	31.5	70.4	85.2
Riffer	2019	Inpt	3.4	63				
Timaus	2019	Inpt	1.5		46.0	67.8	9.2	24.1

Zanarini MC, et al. *Comp Psychiatry*. 2001;42(2):144-150. Pascual JC, et al. *Int Clin Psychopharmacol*. 2010;25(6):349-355. Bridler R, et al. *Eur Neuropsychopharmacol*. 2015;25(6):763-772. Moeller KE, et al. *Ment Health Clin*. 2016;6(2):68-74. Riffer F, et al. *Int J Psychiatry Clin Pract*. 2019;23(3):178-188. Timäus C, et al. *BMC Psychiatry*. 2019;19(1):393.

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Cochrane Review of Pharmacotherapy of BPD: Results of Meta-Analysis

- Antidepressants
 - No benefit
- Mood stabilizers
 - Valproate: Anger, interpersonal relationships
 - Lamotrigine: Anger, impulsivity
 - Topiramate: Anger, interpersonal problems, impulsivity
- Omega-3 fatty acids
 - Suicidality, depression

Cochrane Review of Pharmacotherapy of BPD: Update (2015)

- Antidepressants
 - No new placebo-controlled studies since 2004
- Antipsychotics
 - Placebo-controlled study of quetiapine
 - 8-week study comparing quetiapine 150 mg, 300 mg, and placebo
 - Efficacy found for Zanarini Rating Scale for BPD (ZAN-BPD), interpersonal symptoms, affective symptoms, cognitive symptoms
- Mood stabilizers
 - Small study of divalproex sodium as add-on to DBT (no effect)

Cochrane Review of Pharmacotherapy of BPD: Update (2020)

- Antidepressants
 - Still no new placebo-controlled studies
- Antipsychotics
 - No new placebo-controlled studies
- Mood Stabilizers
 - Large randomized control study of lamotrigine



Meta-Analysis of Placebo-Controlled Studies of Lamotrigine in Treating BPD

3 randomized placebo-controlled studies (n=330)

Conclusions

- Lamotrigine is not superior to placebo for the treatment of patients with BPD
- Impulsivity: No significant difference between lamotrigine and placebo in treating core symptoms of impulsivity
- Affective instability: Unable to pool data to examine efficacy in treating affective instability because different scales were used in the studies
- Aggression: The 2 small studies found lamotrigine more effective than placebo in treating aggression, but the 1 large study was negative

Assimilation of Conclusions Regarding the Use and Efficacy of Medication in the Treatment of BPD

- **Antidepressants**
 - Vast majority of patients with BPD are treated with antidepressants, particularly with SSRIs
 - There is no evidence from placebo-controlled studies demonstrating the efficacy of antidepressants
- **Antipsychotics**
 - Many patients with BPD are treated with SGAs
 - The evidence from placebo-controlled studies demonstrating the efficacy of antipsychotic medication is modest, at best
- **Mood Stabilizers**
 - Many patients with BPD are treated with mood stabilizers
 - The evidence from placebo-controlled studies demonstrating the efficacy of mood stabilizers is modest, at best

Assimilation of Conclusions Regarding the Use and Efficacy of Medication in the Treatment of BPD

- **Benzodiazepines**
 - Many patients with BPD are treated with benzodiazepines
 - There are no placebo-controlled studies of benzodiazepines
- **Omega-3 Fatty Acids**
 - Few patients with BPD are treated with omega-3 fatty acids
 - There is more evidence of omega-3 fatty acids in the treatment of BPD than other medications such as antidepressants

3 Practical Take-Aways

- ✓ When using a screening test, the screen represents the first part of a 2-stage evaluation process
- ✓ Borderline personality disorder is often overlooked in clinical practice, and it can be screened by assessing affective instability
- ✓ The diagnosis of borderline personality disorder should be discussed with patients in the same way other psychiatric disorders are discussed