The rejection-rage contingency in BPD

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DSM-IV criteria for BPD (5 required for diagnosis)

1. frantic efforts to avoid abandonment
2. interpersonal instability
3. unstable identity
4. potentially harmful, impulsive behavior
5. suicide threats/attempt or self-mutilation
6. affective instability
7. inappropriately intense, uncontrolled anger
8. feelings of emptiness
9. transient paranoia or dissociation under stress
Inappropriate intense anger or difficulty controlling anger

(DSM-IV -TR; APA 2000)

• One of the most stable BPD criteria (McGlashan et al., 2005)

• Evident in daily lives of people with BPD

  • More extreme, sudden switches between quarrelsome & non-quarrelsome behaviors in BPD than controls (Russell et al., 2007)
Clinical understanding of rejection-contingent rage in BPD

“The anger is often elicited when a caregiver or lover is seen as neglectful, withholding, uncaring or abandoning.” (DSM-IV-TR; APA, 2000)
Inappropriate intense anger or difficulty controlling anger

(DSM-IV -TR; APA 2000)

• Disrupts personal & therapeutic relationships (e.g., Whisman & Schonbrun, 2009; Rusch et al, 2008; Smith et al., 1995)

• Interpersonal turmoil has serious consequences
  • trigger of self injury & suicidal behavior (Brodsky et al., 2006; Welch & Linehan, 2002)
  • impedes the supportive connections that promote recovery (Gunderson et al., 2006; Zanarini et al., 2005)
Overview of this research

- Examines the extent that rage in BPD is contingent upon perceived rejection

- Draws upon work on rejection-triggered rage in non-clinical samples

- Uses 2 methods in same BPD sample
  - Priming experiment
  - Experience-sampling diary
Rejection-contingent rage in general samples

• Rejection normatively elicits rage, but with significant individual differences (e.g., Leary & Baumeister, 2000; Leary et al., 2006)

• Rejection sensitivity (RS) model developed to explain these differences (Downey & Feldman, 1996)
Rejection Sensitivity (RS) Model

Anxiously Expect Rejection

If potential rejection cue

Cue-triggered cognitive-affective processes

Relationship problems

Interpersonal Behavior
• Rage
Adult Rejection Sensitivity Questionnaire (ARSQ) Sample Item

You approach a close friend to talk after doing something that seriously upset him/her.

How concerned or anxious would you be over whether or not your friend would want to talk with you?

I would expect that he/she would want to talk with me to try to work things out.

Very unconcerned

Very concerned

Very unlikely

Very likely

1  2  3  4  5  6

1  2  3  4  5  6
Relevance of RS model to BPD

Adult RSQ scores (range 1-36)

Control: 6.2

BPD: 14.9

90% = 13.3

Mean = 8.6

normative sample N=685
RS predicts rejection-contingent rage in non-clinical samples

- **Lab experiments**
  RS → heightened cognitive accessibility of rage when primed by rejection
  (e.g., Ayduk et al., 1999)

- **Daily diary study of couples**
  RS → more conflicts between partners on days after female partner felt rejected
  (Ayduk et al., 1999)

(for review, see Romero-Canyas et al., 2010)
Current Research Procedures

Community participants complete diagnostic interviews (SIDP-IV, SCID-I)

If eligible, return to the lab for

• Questionnaires
• Lab experiments
• Experience-sampling diaries
Eligibility

BPD group: BPD diagnosis, few exclusions

• No cognitive disorder, or illiteracy
• No primary psychotic disorder
• Not intoxicated during study sessions

Controls: Healthy and high functioning

• No psychiatric meds. or disorders for 1 yr
• Less than 3 criteria for any single PD
• High functioning (GAF > 80)
Participants

- 45 BPD
- 40 Healthy Controls
- Mean age = 33.5 years (SD=10.2)
- 50% from racial ethnic minority groups
- 76% female
Primming Experiment

- Examines strength of the automatic cognitive association between rejection and rage

- Association strength = extent that one construct facilitates bringing to mind another construct more quickly
  - Shown by faster response time

(See Bargh et al., 1995; 1996)
Priming task procedure

Fixation points (3 seconds)
Priming task procedure
Prime word (90 ms) above or below fixation
Priming task procedure
Prime word masked by string of letters (10 ms)
Primbing task procedure
Target word replaces fixation
**Priming task procedure**

Computer measures latency for beginning to pronounce target word

"TARGET"
4 word types used as primes & targets

- **REJECTION:**
  
  Reject, Abandon, Betray, Exclude, Ignore, Leave

- **RAGE:**
  
  Rage, Anger, Slap, Hit, Hurt, Revenge

- 2 control conditions:
  
  - **NEUTRAL:** (e.g. Map)
  
  - **NEGATIVE:** (e.g. Pollute)

(same design, word stimuli as Ayduk et al, 1999).
Analyses:

Computed each individual’s median latency for starting to pronounce:

• Rage words following:
  » rejection
  » neutral
  » negative

• Rejection words following:
  » rage

Group means compared using GLM

• Controlled for sex, age, education, trait anxiety, and median pronunciation latency across ALL trials
Priming Expt Hypothesis 1:

<table>
<thead>
<tr>
<th>PRIME</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rejection</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td></td>
</tr>
</tbody>
</table>

BPD faster

No difference

Rage

No difference
Rage word latency by prime type

Group effect: rage following rejection, $t(60) = -2.07$, $p < .05$

Berenson et al. (2011) Journal of Abnormal Psychology
Primming Expt Hypothesis 2:

<table>
<thead>
<tr>
<th>PRIME</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rejection</td>
<td>Rage</td>
</tr>
</tbody>
</table>
| Rage        | Rejection

BPD FASTER

No difference
Rejection word latency following rage primes

Group effect: rejection following rage, $t$ (60) < 1, *ns.*
Priming experiment results

Specific, automatic cognitive link between rejection and rage in BPD relative to controls
Diary study of rejection-contingent rage in daily life

- Electronic experience-sampling diary (palm pilot)
- Beeped 5 random times daily for 21 days
- Up to 105 entries per participant ($M = 76.7$)
Perceived rejection scale

Please rate the extent to which the following statements are true for you RIGHT NOW:

• I am abandoned
• I am rejected by others
• I am accepted by others (reversed)
• My needs are being met (reversed)

*Items rated 0 (not at all) to 4 (extremely)*
Rage scale

RIGHT NOW to what extent do you feel:

- Irritated?
- Angry?
- Enraged at someone?
- Like lashing out?

*Items rated 0 (not at all) to 4 (extremely)*
Mean ratings across diary period

Group difference: perceived rejection, $t = 9.38, p < .0001$
Group difference: rage, $t = 6.60, p < .0001$
Analyses of within-person rejection-rage contingency:

Dependent variable: Momentary rage

Predictors:
- GROUP (BPD vs. control)
- Momentary perceived rejection (person-standardized)
- GROUP x Momentary perceived rejection

Control variables:
- Sex, age, education
- Mean perceived rejection across diary period
Momentary rage predicted by momentary perceived rejection

Group x perceived rejection, $F(1, 73) = 38.59, p < .0001$

Berenson et al. (2011) Journal of Abnormal Psychology
Linking experiment and diary measures

Dependent Variables:
pronunciation latencies for prime-target pairs

Predictor:
Index of rejection-rage contingency in the diary (median split)

Control variables:
• sex, age, education, trait anxiety
• median pronunciation latency across ALL trials
• mean perceived rejection across diary period
Linking experiment and diary measures

Diary group effect: rage following rejection, $F = 8.20, p < .01$
Conclusion

• Empirical support for clinical notion that rage in BPD is substantially rejection-contingent

• Work in progress:
  --- Looking at whether feelings of rejection are an implicit trigger of non-suicidal self-injury
  --- Identifying moderators of rejection-contingent rage in BPD
  self-regulatory competency
differentiation among negative emotion
  --- How rejection cues may disrupt learning in people with BPD
Changes in affect surrounding self-harm

From diary

Gadassi et al. in preparation
Self-regulatory competency

- Ability to respond in flexible, strategic, and discriminative way to inhibit stimulus-driven hot responses to stress.
- Delay of gratification ability --- number of seconds children can wait for a larger preferred but delayed rewards over an immediately available small reward.
RS and SRC: Borderline Features (PAI-BOR)

College sample

- Low EC
- High EC

Bing – 38 yrs

- Low EC
- High EC

Bing – 38 yrs

- Low delay ability
- High delay ability

Ayduk et al. 2008 Journal of Research in Personality
Delay of gratification: money (Kirby at al, 1999)

“Would you prefer $15 today or $35 in 13 days?”

9 different discount rates going from small to large.
Figure 1 Probability of choosing LDR, BPD vs HC, female only (Reward Size Large)

Figure 2 Probability of choosing LDR, BPD vs HC, female only (Reward Size Medium)

| group(BPD) | -1.1048 | 0.4959 | 0.0259 |

Berenson, Yang, Downey, in progress
Thanks

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....James Breiling, our program officer, for encouraging our interest and persistence when motivation flagged

.... to our research participants, whose effort and willingness to share their experiences make this research possible.
Adult RSQ

- 9 situations (with partners, close friends, family members, supervisor, potential friends/partners)
- Evidence for convergent and discriminant validity


Berenson, Downey, Rafaeli, Coifman, & Leventhal Paquin (in press) Journal of Abnormal Psychology

- In this sample (n=85)
  - Test-retest reliability (over 4-16 weeks) = .91
  - Internal consistency reliability = .89