

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/attempts 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)

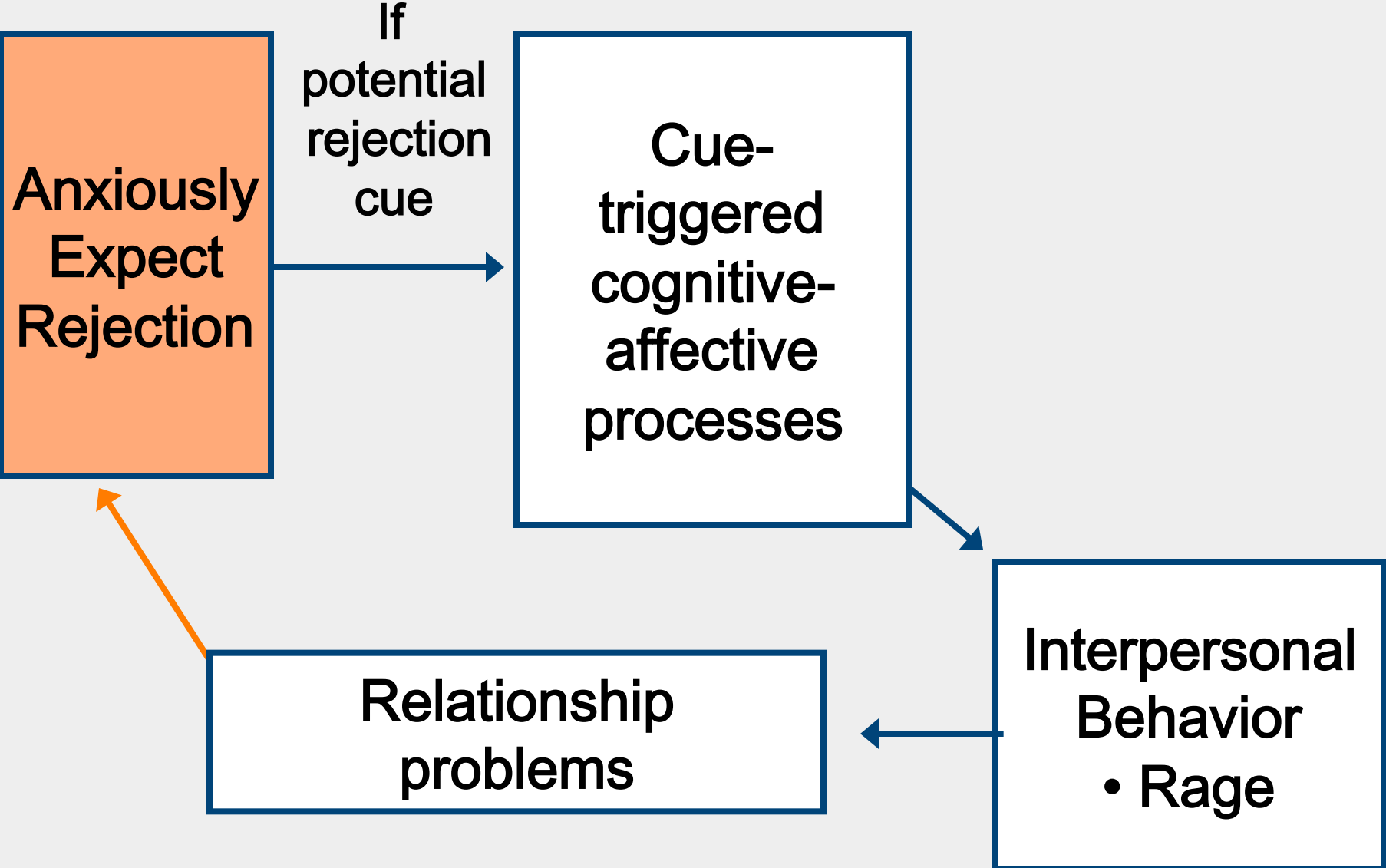
Overview of this research

- **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



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?**

Very unconcerned

Very concerned

1 2 3 4 5 6

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

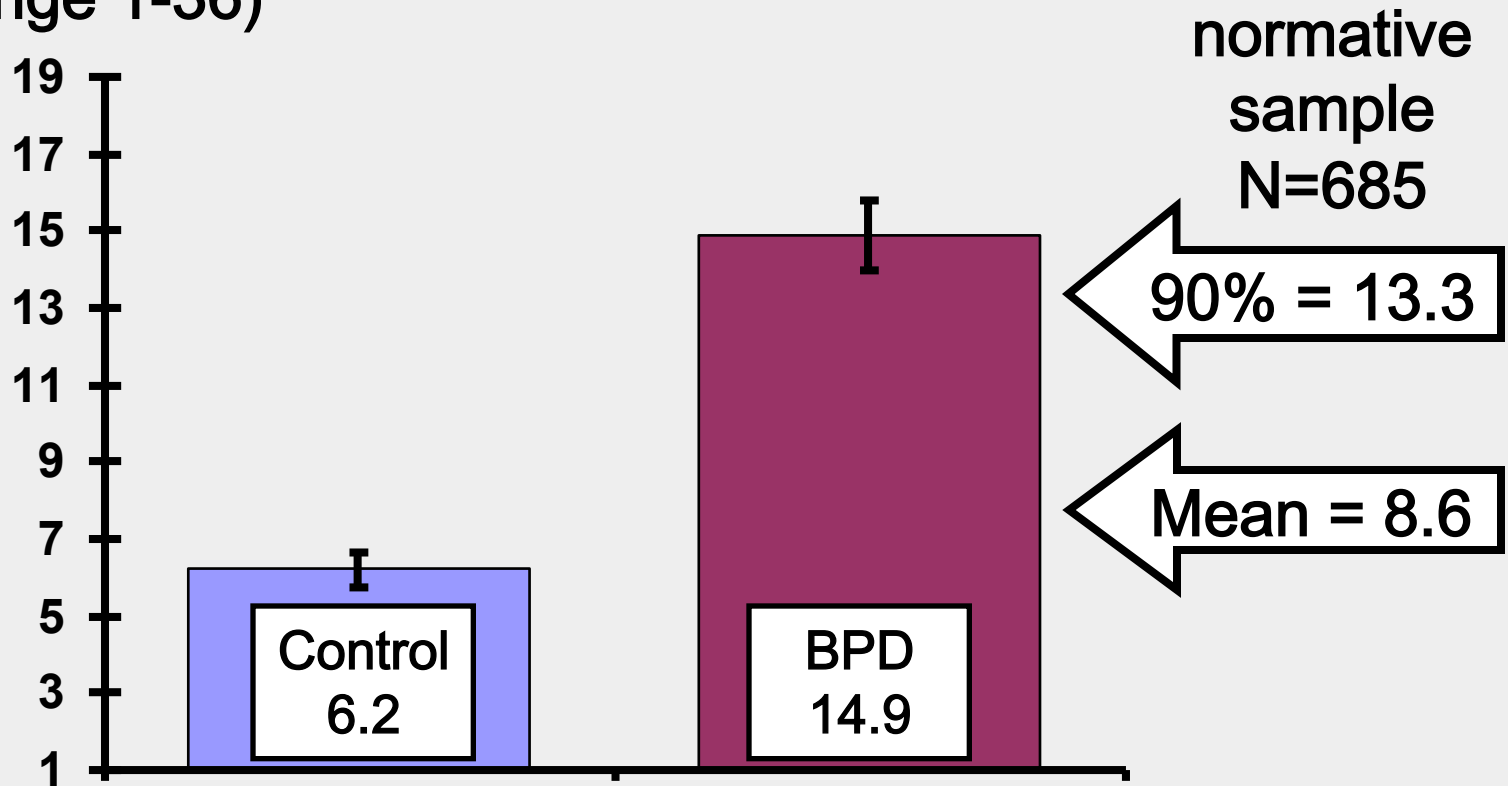
Very unlikely

Very likely

1 2 3 4 5 6

Relevance of RS model to BPD

Adult RSQ scores
(range 1-36)



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

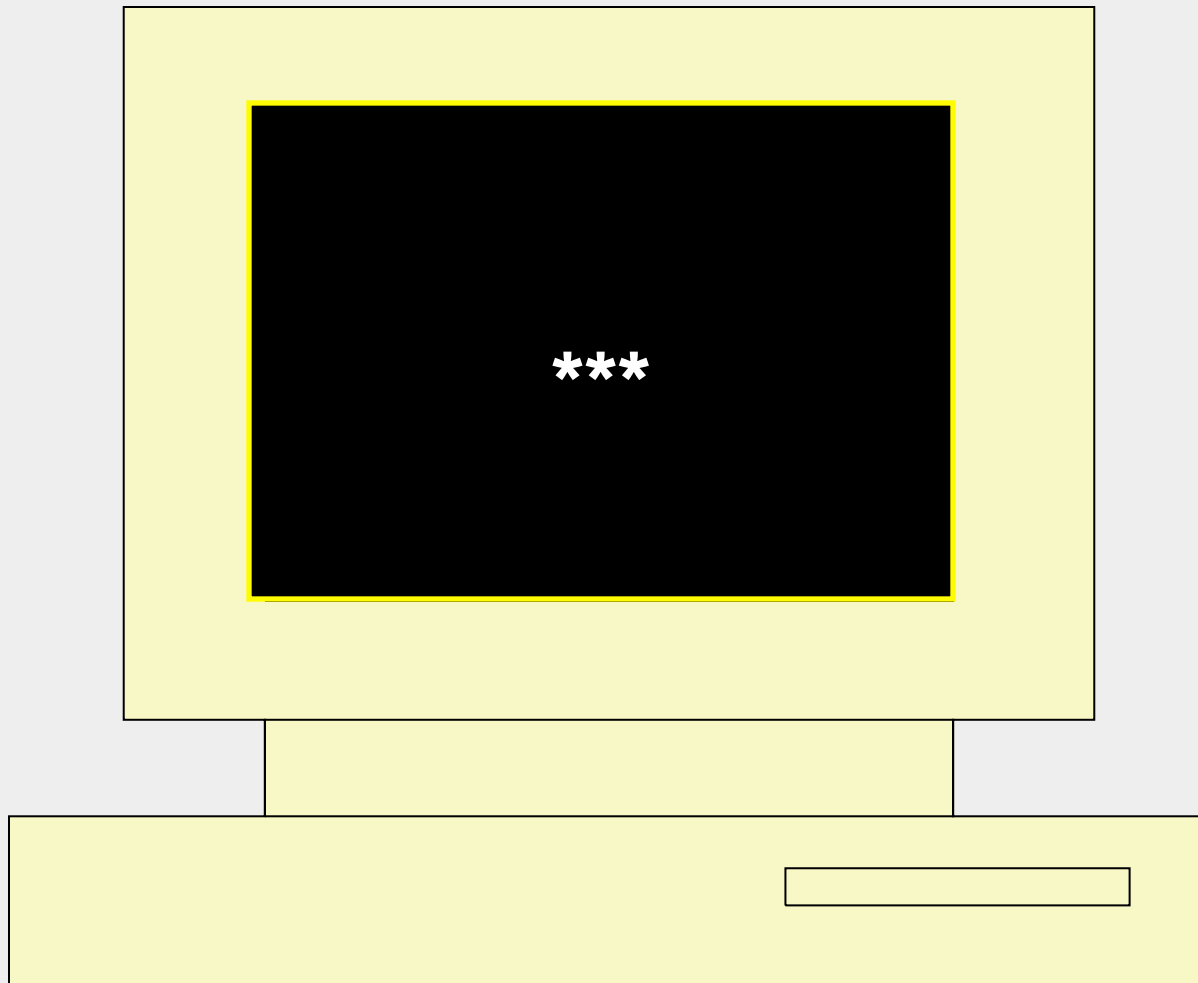
Priming Experiment

- 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)

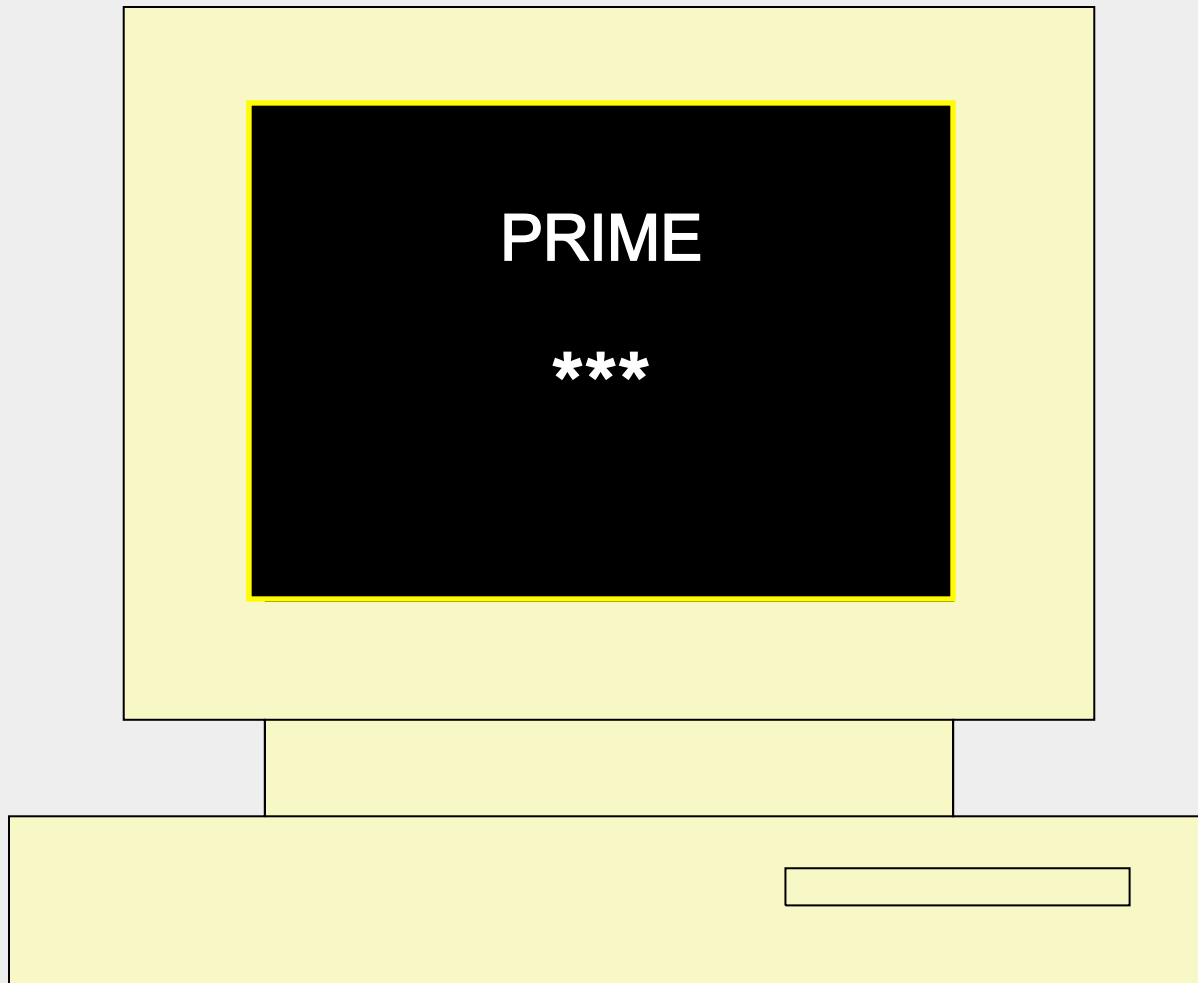
Priming task procedure

Fixation points (3 seconds)



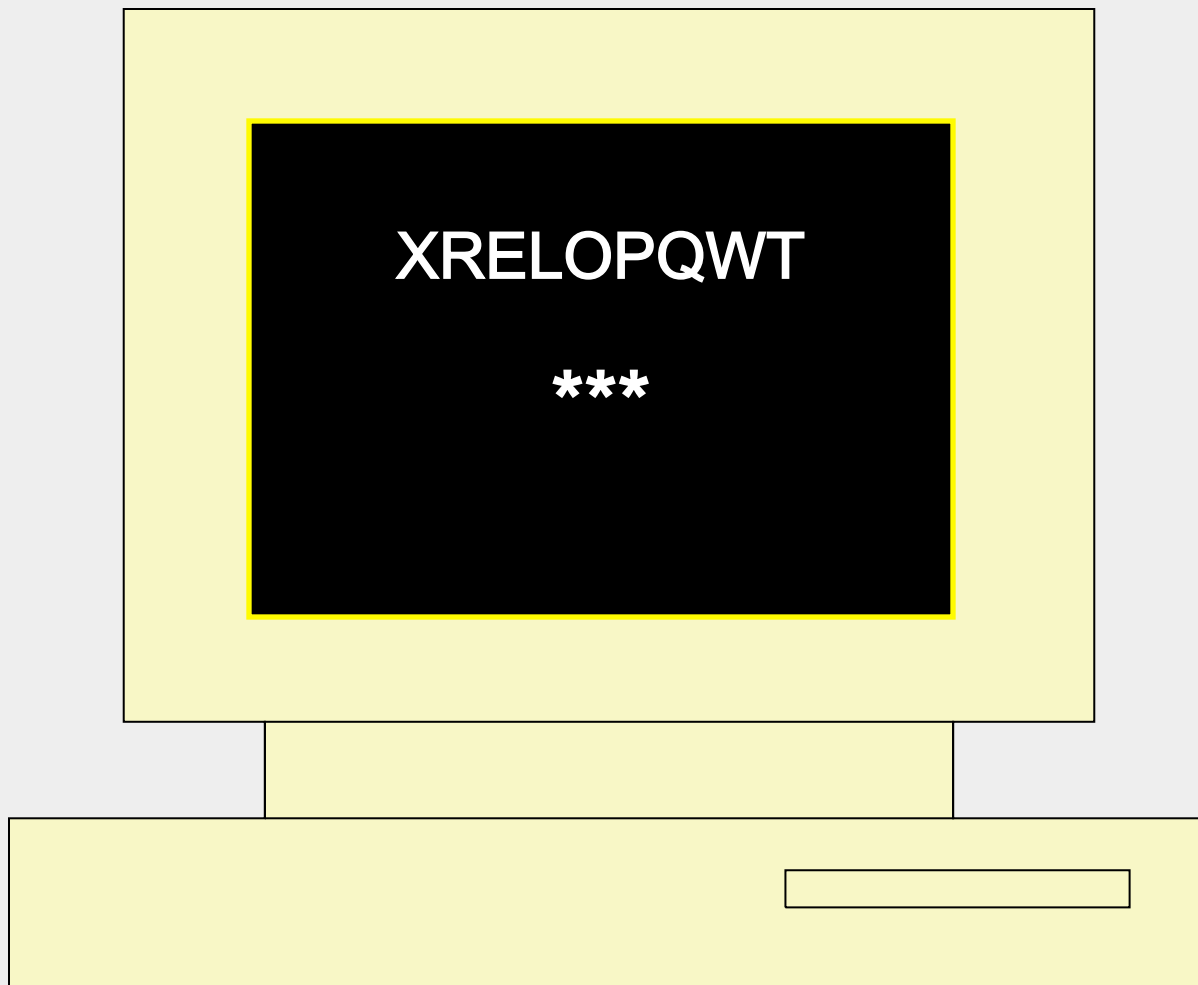
Priming task procedure

Prime word (90 ms) above or below fixation



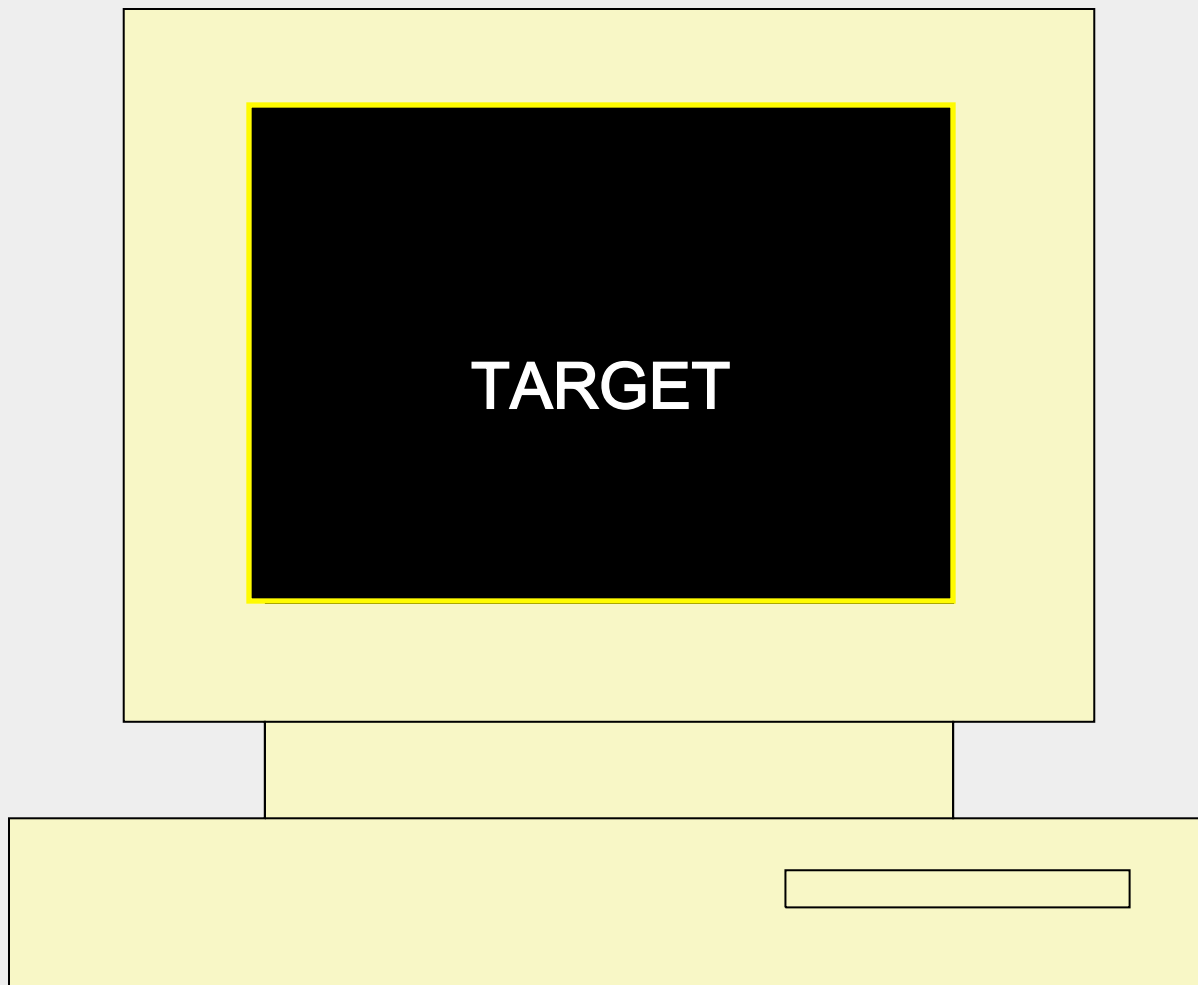
Priming task procedure

Prime word masked by string of letters (10 ms)



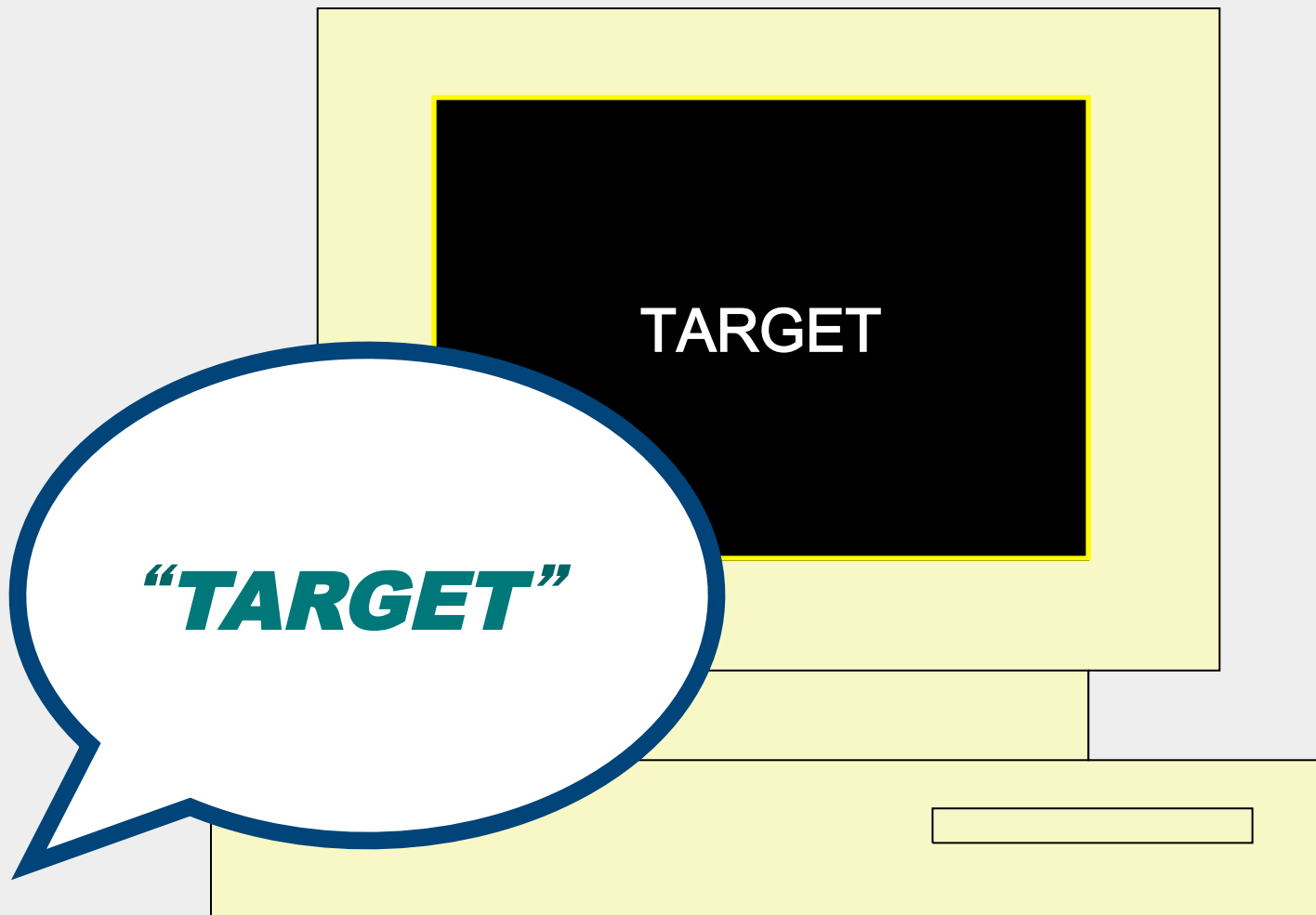
Priming task procedure

Target word replaces fixation



Priming task procedure

Computer measures latency for beginning to pronounce target word



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:

PRIME

TARGET

Rejection

BPD FASTER



Neutral

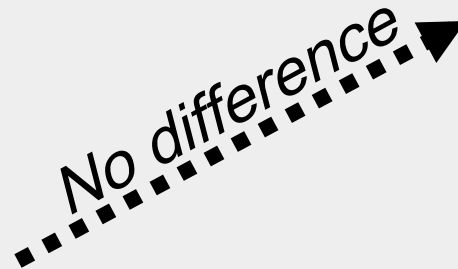
No difference



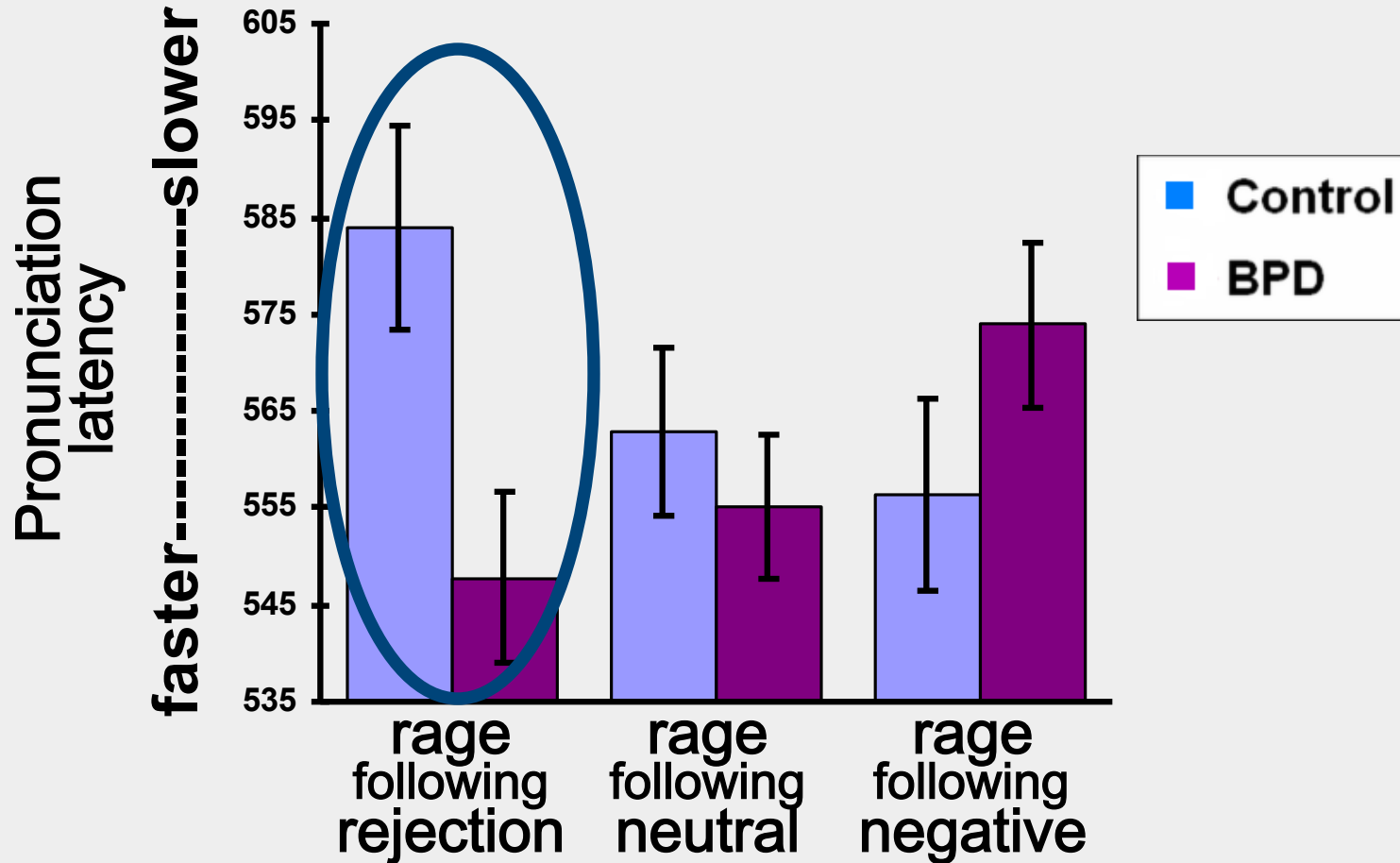
Rage

Negative

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

Priming Expt Hypothesis 2:

PRIME

TARGET

Rejection

BPD FASTER

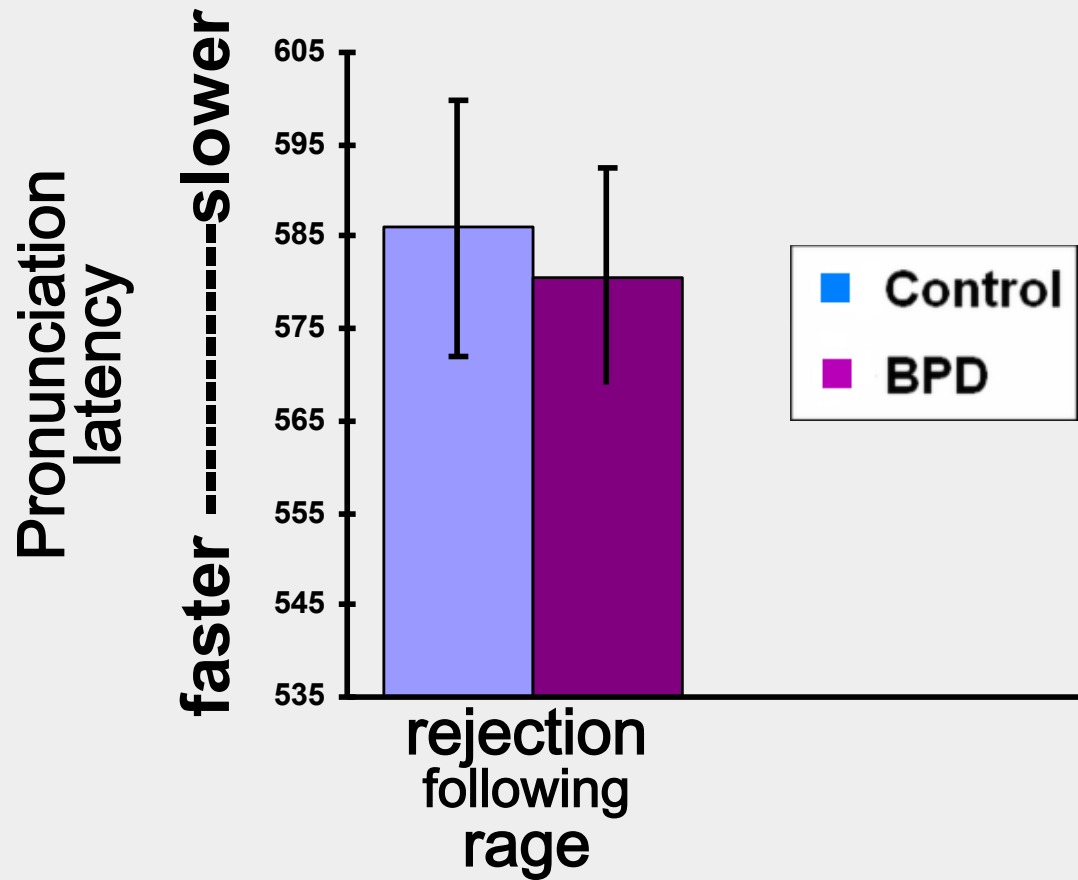

Rage

Rage

No difference


Rejection

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)

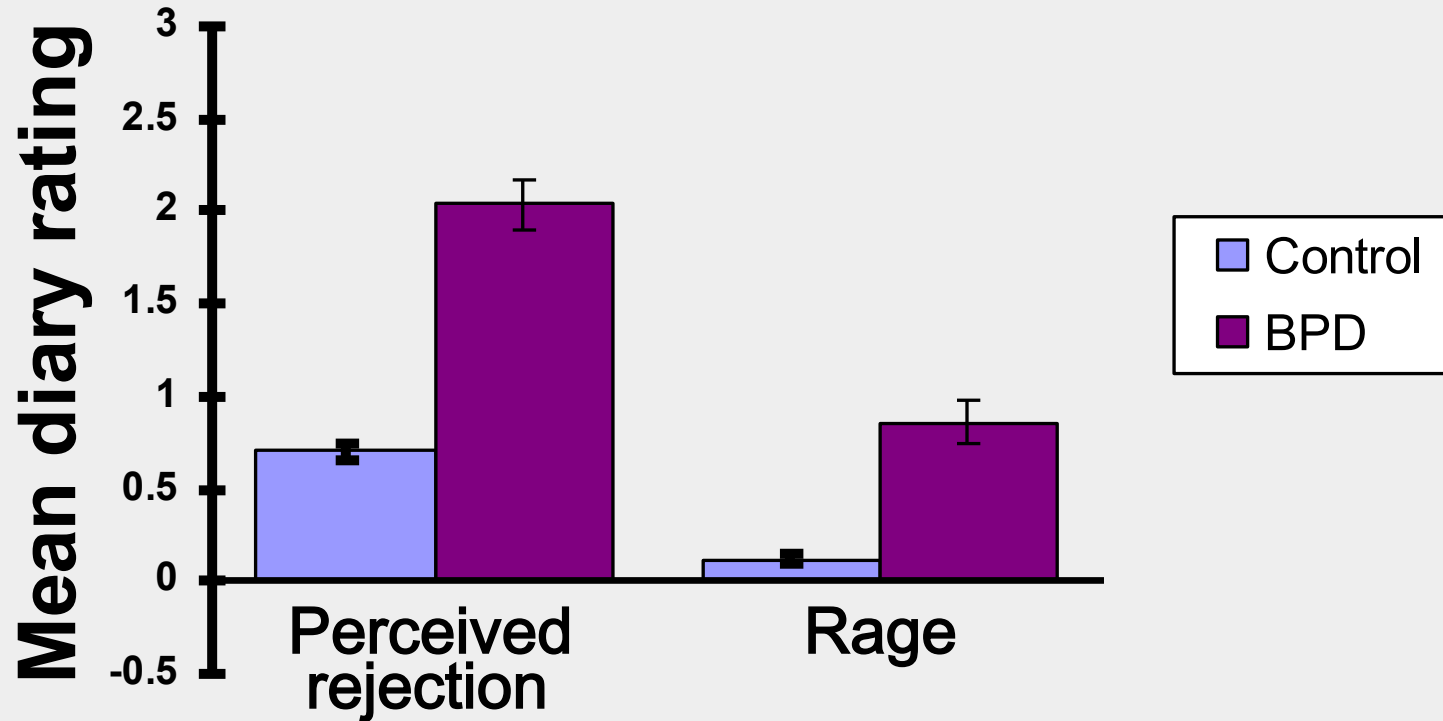
Rage scale

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

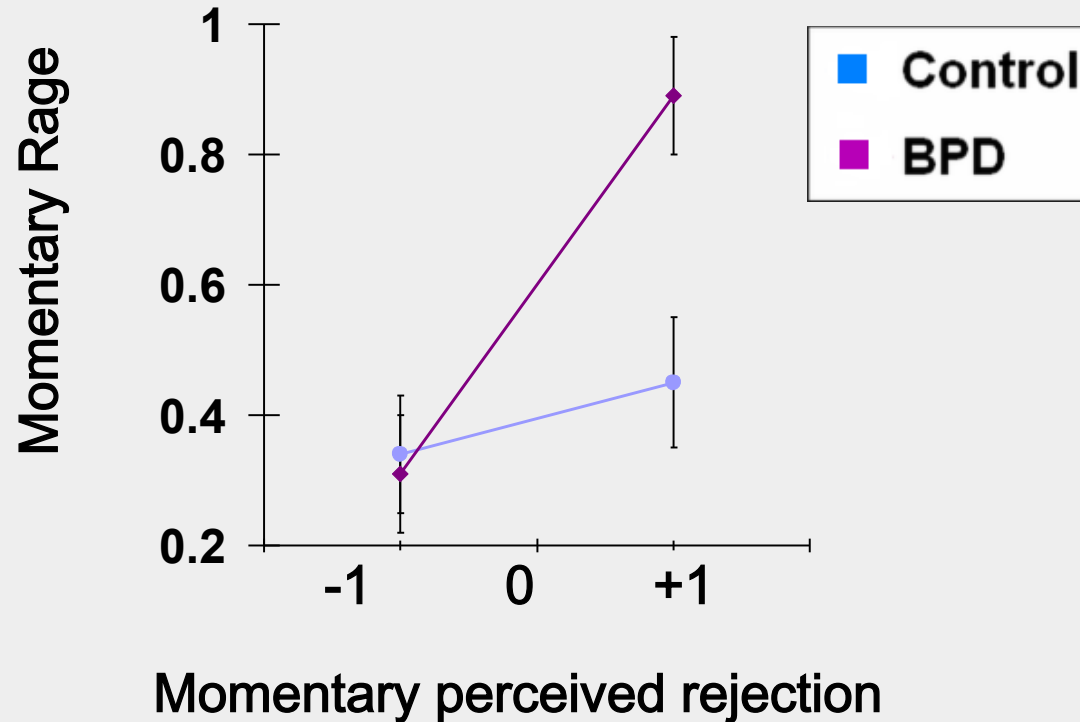
Predictors:

- 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

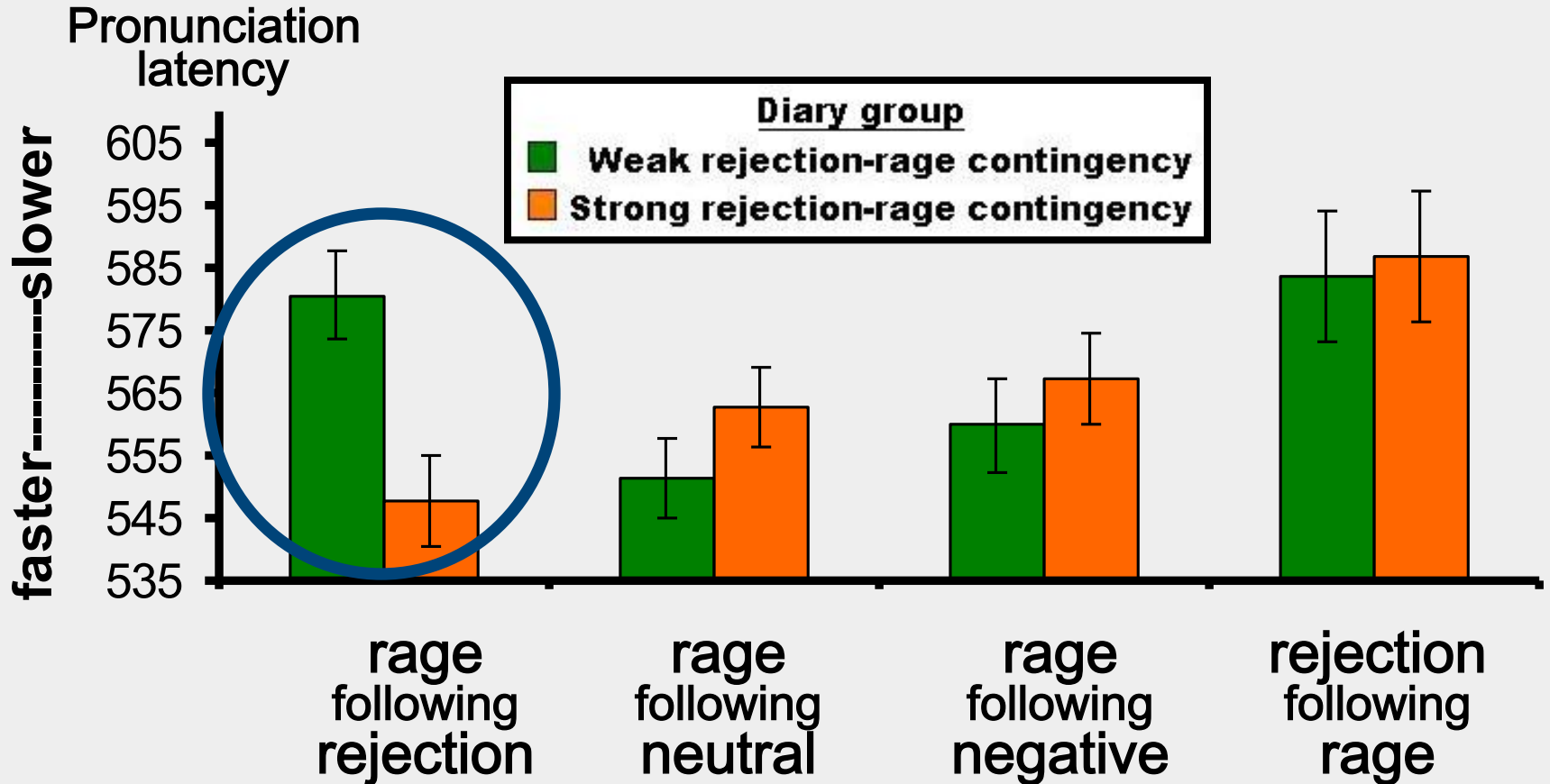
Predictor:

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

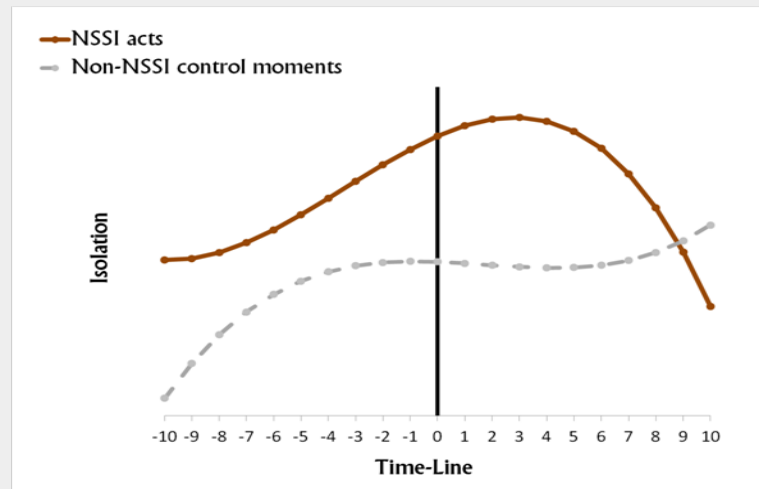
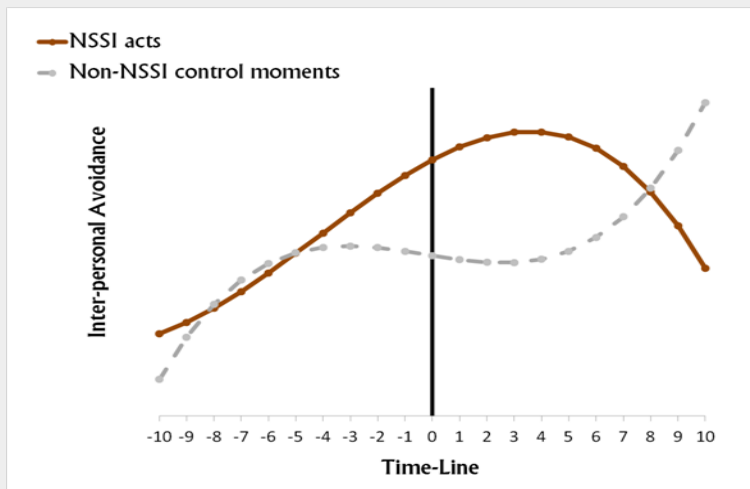
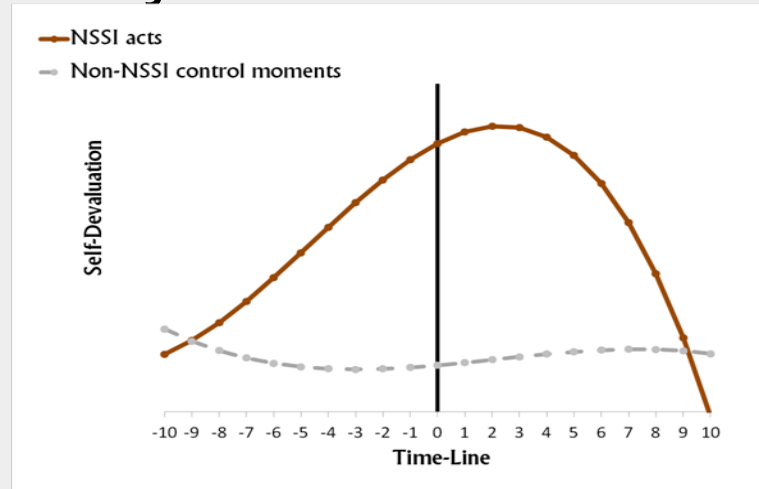
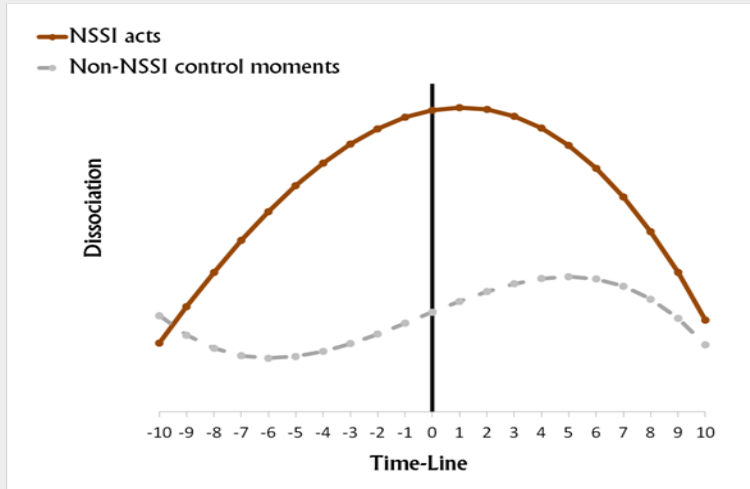


Diary group effect: rage following rejection, $F = 8.20$, $p < .01$

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

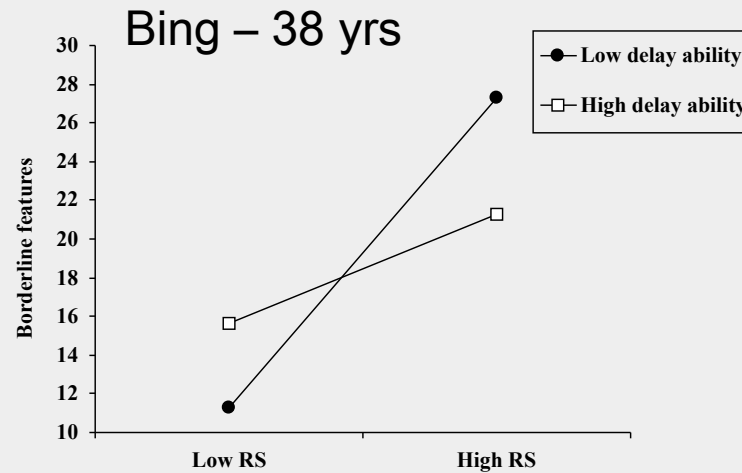
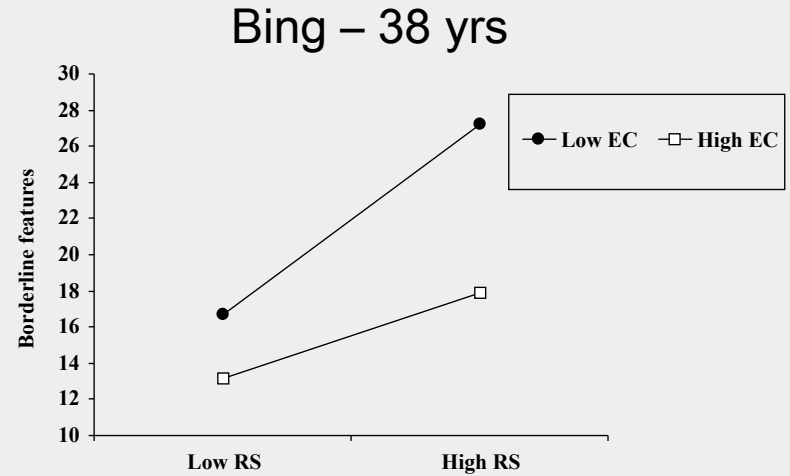
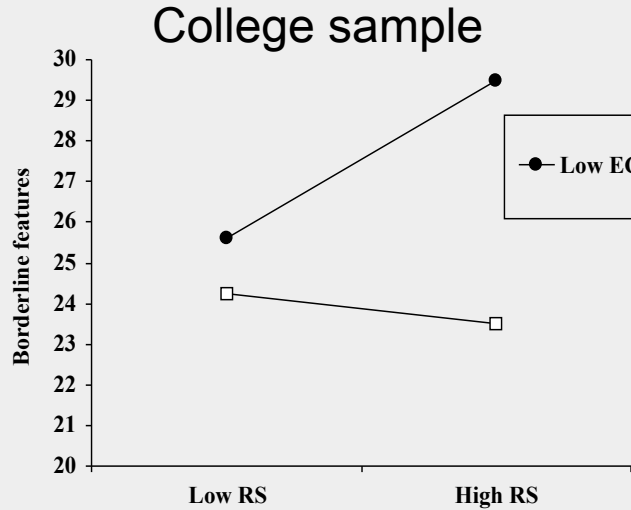


Self-regulatory competency

- 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.

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RS and SRC: Borderline Features (PAI-BOR)



Delay of gratification: money (Kirby et al, 1999)

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



9 different discount rates going from small to large.

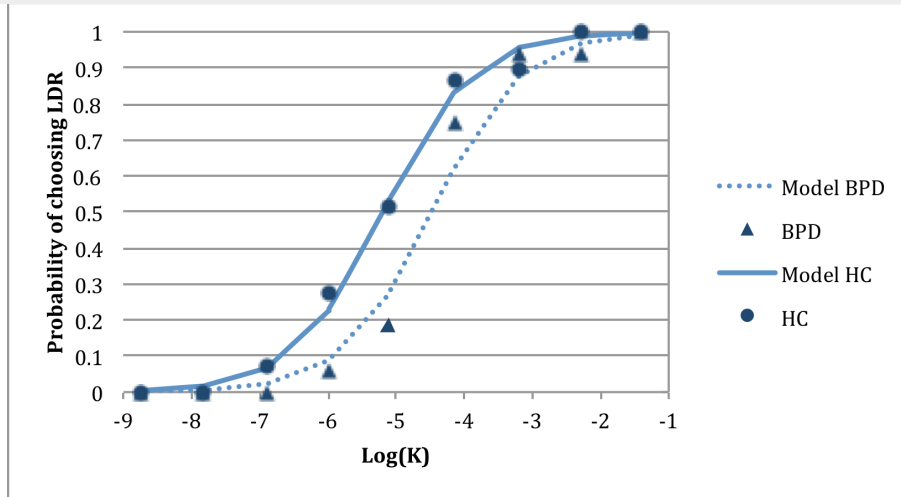


Figure 1 Probability of choosing LDR, BPD vs HC, female only (Reward Size Large)

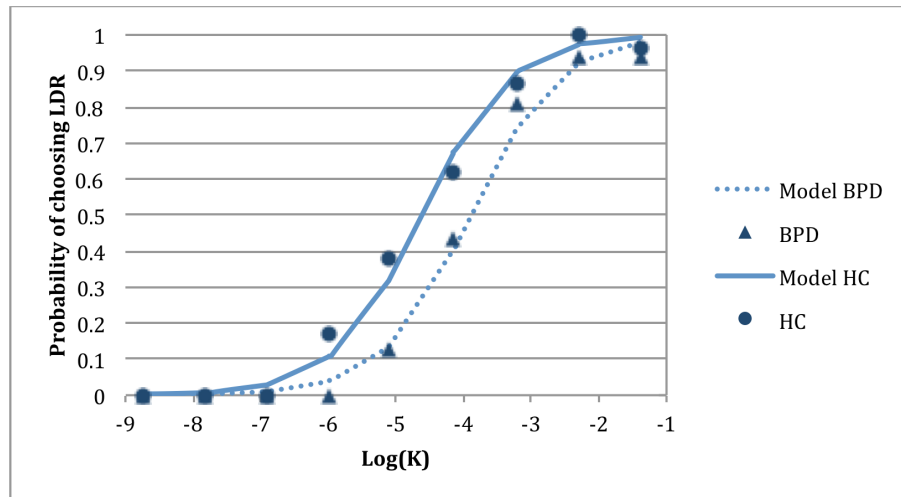


Figure 2 Probability of choosing LDR, BPD vs HC, female only (Reward Size Medium)

group(BPD)	-1.1048	0.4959	0.0259
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Thanks

....to NIMH for funding our project R01MH081948

....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, Gyurak, Downey, Ayduk, Mogg, Bradley, & Pine (2009)
Journal of Research in Personality

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

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