

An Investigation of Counterfactual Thinking Rejection and Chronic Illness Status

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ABSTRACT

Preliminary research from our laboratory revealed that some individuals with diabetes actively reject counterfactual thinking (CFT), or thinking about "what might have been." In the present study we investigated this phenomenon with an expanded sample, examining the relationship between CFT rejection and chronic illness status. Data from an online sample (N = 175) indicated that there was no relationship between chronic illness status and CFT rejection. However, individuals who reject the activity of CFT score lower on brooding. Individuals who are averse to the emotional component of CFT tend to brood more.

INTRODUCTION

- ❖ Counterfactual thinking (CFT) is imagining an event differently than how it actually occurred, particularly the consequences of that alteration (Roese & Olson, 1995).
- ❖ The availability of counterfactual scenarios can lead the individual to feel responsible for their fate, which has strong implications for their emotional affect and behavioral choices (Kahneman & Miller, 1986).
- ❖ Past research from our laboratory revealed a sample of individuals with diabetes who actively rejected counterfactual thinking (DePalma, Sarnie, & Faith, 2020).
- ❖ In this study, we compared CFT rejection tendencies to behavioral patterns of brooding and reflection. Brooding results in prolonging distress by reliving negative events (e.g. "What am I doing to deserve this?"). Reflection represents purposeful thinking and problem solving (e.g. "Write down what you are thinking and analyze it").

Counterfactual Thinking

"If only I had followed a better diet, I wouldn't have been diagnosed with diabetes."

Rumination

Reflection

"I am analyzing recent events to try to understand why I am depressed."

Brooding

"What am I doing to deserve this?"

PURPOSE

The study investigates how the presence of a chronic illness might be related to the tendency for an individual to avoid imagining alternative outcomes to a past event.

METHODS

Participants. The sample included 175 Prolific Academic workers (68 males, 105 females, 1 participant chose the option of "other", and 1 participant chose not to report their biological sex). Participants ranged in age from 18 to 78 years ($M = 31.60$, $SD = 10.76$). Of this sample, 40.5% of individuals reported having a chronic illness. The three most common illnesses that participants reported having were asthma (14.8%), chronic pain (10.8%), and hypertension (7.4%). Only 3.4% of the sample reported having diabetes. Many of the participants (12.7%) reported having multiple chronic illnesses, ranging from 2 to 4 illnesses.

Materials. The quantitative measure included:

CFT Rejection Scale (CFTR)

Ruminative Response Scale – Short Form (RRS; Treynor et al., 2003)

Procedure. We administered an 8-minute online survey through the Prolific platform to assess participants' tendency to reject counterfactual thinking, and to engage in brooding and/or reflection. Each participant received \$1.27 compensation for their time.

RESULTS

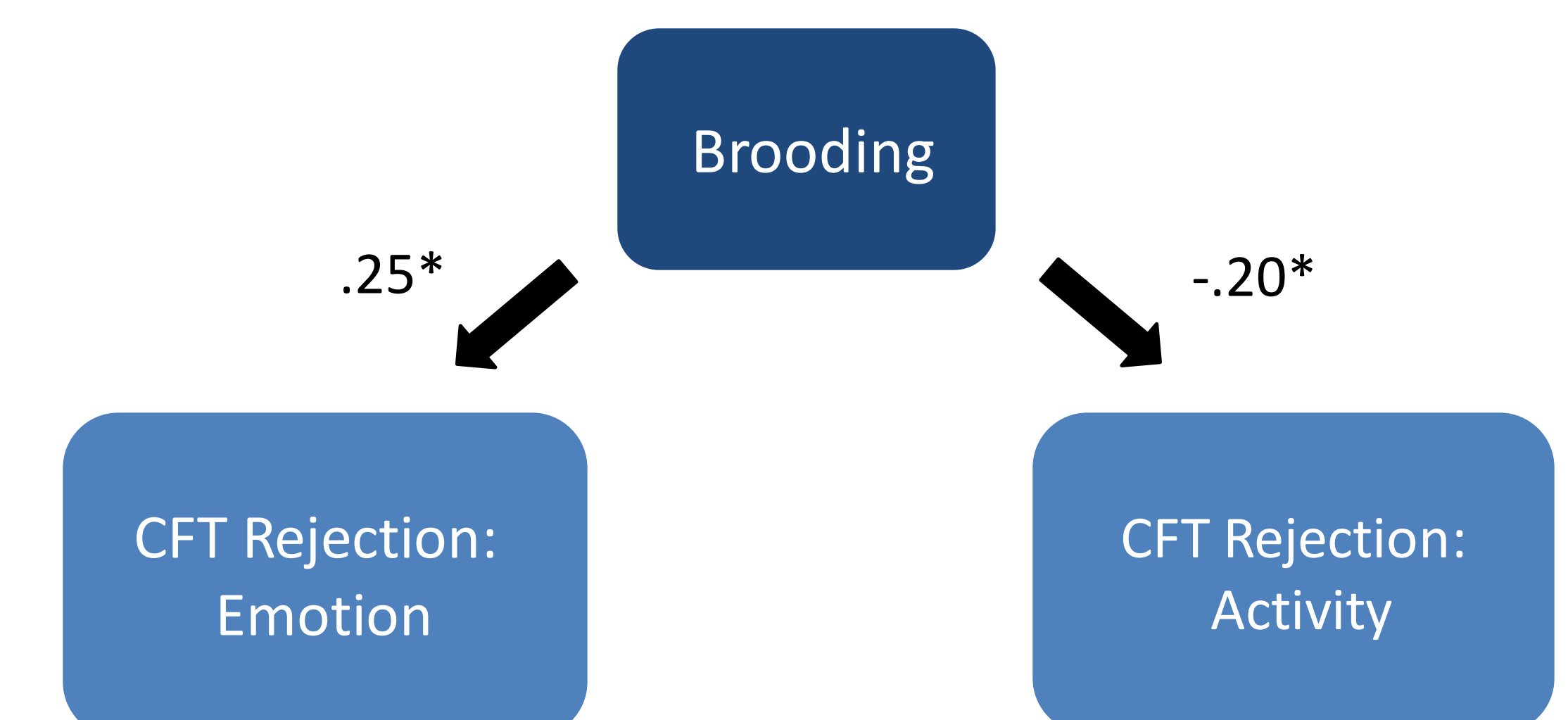
- ❖ For our CFT Rejection Scale, a principal component factor analysis with a varimax rotation revealed two CFT rejection factors. Cronbach's alpha was .80 for the total scale.

CFT Rejection Scale Rotated Component Matrix		
Item	Factor	
	1	2
1 - Imagining how things could have been different is useless.	-.214	.777
2 - Thinking of ways in which things could have been different is hurtful.	.127	.805
3 - I avoid thinking about how things could have been different.	-.704	.262
4 - I have no interest in imagining how things could have been different.	-.787	.174
5 - I imagine alternatives to my current situation.	.795	-.032
6 - I find myself thinking about "what could have been."	.831	-.027
7 - There is no point in ruminating over "what if's."	-.445	.628
8 - I enjoy imagining how things could have been different.	.498	-.436

- **Factor 1: CFT-Rejection-Activity** incorporated 4 items. The items that loaded on this factor were those that most closely represented avoidance of engaging in the activity of CFT (e.g. "I imagine alternatives to my current situation."). Cronbach's alpha reached .81 for this subscale.
- **Factor 2: CFT-Rejection-Emotion** incorporated 4 items. Items were those that emphasized the emotional consequences of engaging in CFT (e.g. "Imagining how things could have been different is hurtful."). Cronbach's alpha reached .69 for this subscale.

RESULTS (CONT.)

- ❖ Contrary to our initial hypothesis, chronic illness status was not related to CFT-Rejection, [$F(2, 169) = 1.73$, $p = .18$, $\eta^2 = .020$ and power = .36].
- ❖ CFT rejection tendencies were significantly related to rumination scores [$F(2, 168) = 20.61$, $p < .001$, $\eta^2 = .20$ and power = 1.00]:
 - Brooding was negatively related to CFT rejection-activity scores, [$F(1, 169) = 7.50$, $p = .007$, $\eta^2 = .06$ and power = .92]. Individuals who were least likely to brood were most likely to reject the activity of counterfactual thinking.
 - Brooding was positively related to CFT rejection-emotion scores, [$F(1, 169) = 11.55$, $p = .001$, $\eta^2 = .04$ and power = .78]. Individuals who were most likely to brood were also averse to the negative emotional consequences of counterfactual thinking.



DISCUSSION

- ❖ This study replicated earlier work insofar as some individuals evidenced a stronger tendency to reject the activity of counterfactual thinking than did others.
- ❖ CFT rejection tendencies were not related to the presence of a chronic illness or the number of chronic illnesses an individual reported.
- ❖ Since the present sample drew only six individuals with diabetes, it will be necessary to further test the original hypothesis that this tendency is related to a diabetes diagnosis.

IMPLICATIONS

- ❖ The tendency to reject the activity of CFT was associated with a decreased tendency to brood.
- ❖ Individuals who are most susceptible to brooding also contend that engaging in counterfactual thinking can be useless and hurtful.
- ❖ It might prove useful to identify those who tend to brood to help bolster their ability to identify and avoid counterfactual thoughts that are detrimental.