

# The Automatic Thoughts Questionnaire – Believability Scale as a Measure of Cognitive Fusion



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## Introduction

- Acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) and traditional cognitive therapy for depression (CT; Beck, Rush, Shaw, & Emory, 1979) target believability of cognitions, but in purportedly different ways.
- The Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980) is one of the most widely-used self-report cognitive measures of depression.
- The ATQ-B has been shown to mediate differences in outcomes between ACT and CT (e.g., Zettle, Rains, & Hayes, 2011).
- To date, however, the psychometric properties of the ATQ-B have not been evaluated or reported.

## Purpose

- The major purpose of these studies was to examine the reliability, discriminant validity, and factor structure of the ATQ-B within both clinical and non-clinical samples.

## Method

### Participants

- **College Student Sample (Studies 1, 3)**
  - $N = 316$ , 65% female,  $M_{age} = 20.38$  (Study 1)
  - $N = 51$ , 74% female,  $M_{age} = 23.65$  (Study 3)
  - Completed online administration of the ATQ and the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996).
- **Clinical Sample (Study 2)**
  - $N = 178$ , 83% female,  $M_{age} = 40.48$
  - Had self-presented for treatment of depression in prior clinical research or through departmental clinic.
  - Significantly more depressed than college sample  $t(492) = 25.60, p < .001, d = 2.43$

### Measures

- **Automatic Thoughts Questionnaire:** Participants were asked to separately indicate according to a 5-point scale (1 = “not at all”, 5 = “all the time”) “how strongly, if at all, you tend to believe” 30 depressing thoughts “over the last week.”
- **Beck Depression Inventory:** The BDI-II is a widely used, 21-item, self-report measure of depression. Total scores range from 0-63, with higher scores indicative of greater levels of depression.

## Results

### Studies 1 and 2

- Good internal consistency, concurrent validity, and convergent validity demonstrated in both samples.

	College Sample (Study 1)		Clinical Sample (Study 2)	
Internal Consistency	$\alpha = .97$	SH = .95	$\alpha = .95$	SH = .93
Correlation with Depression	$r = .57, p < .001$		$r = .53, p < .001$	
Factor Analysis	1. Self-Debasement 2. Life Dissatisfaction 3. Hopelessness 4. Self-Inefficacy 5. Ruminative Shame		1. Demoralization 2. Self-Disparagement 3. Rumination 4. Amotivation	

- Multiple regression model predicting depression (BDI) from ATQ-B factor scores was significant for both samples.
  - College Sample:  $F(5, 310) = 48.28, p < .001$
  - Clinical Sample:  $F(4, 173) = 18.92, p < .001$

Factor	College Sample $R^2 = .43, p < .001$			Clinical Sample $R^2 = .29, p < .001$			
	$\beta$	$t$	$p$	$\beta$	$t$	$p$	
1. Self-Debasement	-.17	-2.07	.04	1. Demoralization	.22	2.16	.03
2. Life Satisfaction	.60	8.29	<.001	2. Self Disparagement	.35	3.54	.001
3. Hopelessness	-.10	-1.14	.25	3. Rumination	-.04	-.42	.68
4. Self-Inefficacy	.29	3.97	<.001	4. Amotivation	.06	.66	.51
5. Ruminative Shame	.04	.56	.58				

- Differing dimensions of cognitive fusion differentially account for variability in levels of depression.
  - Subclinical levels of depression appear to be associated with fused negative evaluations of life and of one’s abilities.
  - Fusion with a broader array of self-deprecating thoughts and believing further engagement in life to be pointless appear to be more predictive of clinical ranges of depression.

### Study 3

- Both instruments displayed acceptable and comparable levels of temporal consistency based upon test-retest reliabilities
  - ATQ-B:  $r = .81$
  - BDI-II:  $r = .76$
- Positive correlation between levels of cognitive fusion and depression establish further support for concurrent validity of ATQ-B

## Discussion

- Psychometric support for past, present, and future use of ATQ-B as process measure of cognitive fusion.
  - Adequate internal consistency, and concurrent and convergent validity.
- Discriminates between college students and clinically depressed clients.
  - Unique factor structure for each sample
  - Factor scores differentially related to levels of depression.
- Sufficient temporal stability to support use of ATQ-B as a mediating variable.
- Sufficient data to evaluate clinically significant changes in cognitive fusion utilizing Jacobson & Truax’s (1991) criteria.

## References

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