Comparison of Metacognitive and Psychological Inflexibility Models of Emotional Distress

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Introduction

Generalized anxiety disorder (GAD) and unipolar depression are two of the most prevalent presenting problems of emotional distress in outpatient mental health settings, either occurring separately (Qin et al., 2010; Wang et al., 2017) or comorbidly (Zhou et al., 2017). The models on which metacognitive therapy (MCT; Wells, 2009) and acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 2012) are based posit different processes in the initiation and maintenance of GAD and depression.

In the metacognitive model (MC), positive and negative metacognitive beliefs about worry and rumination are seen as processes that contribute to the development of GAD and depression, respectively. For the psychological inflexibility (PI) model on which ACT is based, the six subordinate processes of psychological inflexibility (i.e., experiential avoidance, cognitive fusion, living in the past or future, attachment to a conceptualized self, and actions that are incongruent with personal values) are considered as core processes that initiate and maintain emotional distress.

The primary aim of this project was to evaluate the relative degree to which each model accounted for variability in self-reported symptoms of generalized anxiety and depression in a pair of related studies. The findings of this project may hopefully provide a better understanding of the processes contributing to emotional distress and help inform potentially therapeutically integrative ways of alleviating it.

Method

In Study 1, college students ($N = 227$) completed an online survey that included a self-report of generalized anxiety disorder (GAD-7), questionnaires assessing six processes of psychological inflexibility (Brief Experiential Avoidance Questionnaire, Cognitive Fusion Questionnaire, Valuing Questionnaire, Self-as-Context Scale, and Philadelphia Mindfulness Scale), and the Metacognitive Questionnaire (MCQ) that yields five subscales integral to the MC model.

In Study 2, another sample of students ($N = 197$) completed a set of questionnaires including a self-report of depression (Public Health Questionnaire), the same battery of measures assessing the PI model as Study 1, and a modified version of the MCQ that included Positive Beliefs about Rumination Scale and Negative Beliefs about Rumination Scale.

Table 1

Hierarchical Multiple Regression Analyses for Generalized Anxiety Symptoms

	Step 2			Step 3		
	Adjusted R²	ΔR²	β	Adjusted R²	ΔR²	β
Metacognitive model	.43***	.42***		.57***	.04**	
Negative beliefs			.57***			.23**
Positive beliefs			-.004			.07
Cognitive confidence			.10			.02
Need for control			.04			-.10
Cognitive self-consciousness			.07			.11
Psychological inflexibility model	.54***	.52***		.57***	.14***	
BEAQ			.01			.03
CFQ			.42***			.23**
PHLMS awareness			.15**			.12*
SACS			-.15*			-.16*
VQ progress			-.11			-.16*
VQ obstruction			.21**			.16*

*$p < .05$. **$p < .01$. ***$p < .001$

Results

Hierarchical regression analyses indicated that each model made unique, but unequal contributions to generalized anxiety and depression through distinct processes. Demographic variables (i.e., age, gender, race, and Latinx status) at step 1 yielded an insignificant model in both Study 1 ($F_{(4, 222)} = 2.14$, p = .08) and Study 2 ($F_{(4, 174)} = 1.73$, p = .15). Measures from the two models were then alternatively entered at steps 2 and 3

Results suggested that the PI model explained a significantly higher proportion of symptom variability in both generalized anxiety (Table 1; $\overline{Z*} = 2.45$, $p < .01$) and depression (Table 2; $\overline{Z*} = 2.63$, $p < .01$) than the MC model. Across both studies, cognitive fusion and valued living within the PI model and beliefs about the negative consequences of worrying and rumination within the MC model were found to be most predictive of variability in symptoms of emotional distress.

Table 2

Hierarchical Multiple Regression Analyses for Depression Symptoms

	Step 2			Step 3		
	Adjusted R²	ΔR²	β	Adjusted R²	ΔR²	β
Metacognitive model	.52***	.51***		.70***	.05***	
PBRS			.22**			.06
NBRS			.41***			.20**
Cognitive confidence			.18**			.12*
Need for control			.13*			.01
Cognitive self-consciousness			-.05			-.04
Psychological inflexibility model	.65***	.64***		.70***	.17***	
BEAQ			-.01			-.08
CFQ			.43***			.30***
PHLMS awareness			-.02			-.01
SACS			-.02			.003
VQ progress			-.17**			-.17**
VQ obstruction			.32***			.28***

*$p < .05$. **$p < .01$. ***$p < .001$

Discussion

The findings suggest that PI model explains a significantly higher proportion of variability in symptoms of both generalized anxiety disorder and depression than the MC model. The overall results of the two studies suggest that cognitive fusion may play a particularly impactful role in emotional distress, and, moreover, that the salient entanglement is with negative metacognitive beliefs about thinking that characterizes generalized anxiety (worry) and depression (rumination).

Based on these findings, there are some potential adjustments that practitioners of MCT and ACT might consider making in treating emotional distress. For the metacognitive therapist, the range of treatment techniques and strategies used to challenge and modify dysfunctional metacognitive beliefs might be expanded to include defusion exercises and procedures developed by proponents of ACT (Strosahl, Hayes, Wilson, & Gifford, 2004). For ACT therapists, the assessment of metacognitive processes (e.g., MCQ-30, PBSR, NBSR) may identify fused cognitive content that can be effectively addressed with an array of techniques that include but are not limited to those targeting defusion.

The overall findings might also have implications for therapeutic approaches other than ACT and MCT. From the perspective of the process-based approach to CBT suggested by Hayes and Hofmann (2018), other approaches, such as those involving motivational enhancement in facilitating valued living (MacKillop, VanderBroek-Stice, & Munn, 2018), might also target some of same key processes that were identified in our findings.

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