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Differentiating Cognitive Content between Depressed and Anxious Outpatients

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Abstract. Quantitative research suggests that depressed and anxious patients can be differentiated based on their cognitive content. This study used *qualitative* research methods to separate the specific components of open-ended depressive and anxious thought content in 79 psychiatric outpatients. Patients with major depressive disorder (MDD; $n=36$), generalized anxiety disorder (GAD; $n=10$), and other psychiatric disorders (PC; $n=33$) were instructed to (a) describe their most bothersome problem; (b) imagine the worst possible negative outcome followed by the best possible positive outcome; and (c) describe associated thoughts and emotions for each scenario. The content of patients' responses were coded to examine (a) the types and severity of problems; (b) the presence or absence of hopelessness, catastrophizing, helpfulness, and unrealistic positive expectations; and (c) the presence or absence of particular emotions associated with imagined worst and best outcomes. More GAD patients than MDD and PC patients indicated anticipated anxious emotions associated with imagined worst outcomes, and fewer MDD patients than GAD and PC patients indicated anticipated happiness associated with imagined best outcomes. No group differences emerged for the other variables considered. These findings suggest that depressed and anxious patients differ in their cognitive expectancies about future life events in terms of their own anticipated emotional reactions. *Key words:* cognition; cognitive content-specificity; imagery; qualitative analyses.

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The cognitive content-specificity model postulates that depressed and anxious individuals differ in their maladaptive thought content. Depressive thought content reflects the principles of Beck's Negative Cognitive Triad (Beck, 1976), with themes of personal loss and failure evident in negative evaluations of the self, the world, and the future (Clark, Beck, & Brown, 1989; Clark, Beck, & Stewart, 1990). Anxious thought content, in contrast, reflects future-oriented concerns with an anticipation of physical and/or psychological threats and an inability to cope (Beck & Clark, 1988; Tellegen, 1985). An understanding of

cognitions that differentiate depression from anxiety can assist clinicians in making accurate diagnostic decisions, forming precise cognitive case conceptualizations, and developing individualized plans of treatment.

Empirical investigations of cognitive content-specificity have produced robust evidence for specificity in some studies and partial evidence for specificity in others. For instance, Beck, Brown, Steer, Eidelson, and Riskind (1987) reported that depressed patients, but not anxious patients, endorsed thoughts reflecting a pervasive sense of hopelessness. More recently, Beck, Wenzel, Riskind,

Brown, and Steer (in press) demonstrated that patients with a diagnosis of Major Depressive Disorder (MDD) assigned higher likelihoods to worst outcomes associated with their specific life problems and lower likelihoods to best outcomes associated with these problems compared with outpatients with Generalized Anxiety Disorder (GAD) or with other psychiatric disorders. These findings suggest that hopelessness is a cognitive marker that is specific to depression. Other studies have demonstrated the specificity of a looming maladaptive cognitive style in anxious, but not depressed individuals (e.g. Riskind, Williams, Gessner, Chrosniak, & Cortina, 2000; Riskind & Williams, 2005). That is, this line of research suggests that anxious individuals are characterized by cognitive expectancies or mental scenarios that are centred on upcoming threat and danger and associated with catastrophic predictions of future outcomes. Results from these studies indicate that catastrophizing is a cognitive marker that is specific to anxiety.

In contrast, in their meta-analysis based on 13 studies, R. Beck and Perkins (2001) found only partial evidence for cognitive content-specificity. Depressive cognitive content was related more strongly to depressive symptoms than anxious symptoms, but anxious cognitive content was not associated more strongly with anxious symptoms than depressive symptoms. Although it certainly could be the case that depression, but not anxiety, is characterized by cognitive content-specificity, it is important to consider the manner in which the measurement of cognitive content-specificity may bear on interpretation of R. Beck and Perkins' results. All but 1 of the studies (i.e. Wickless & Kirsch, 1988) measured cognitive content using self-report inventories, such as the Cognitions Checklist (CCL; Beck et al., 1987), the Anxious Self-Statements Questionnaire (ASSQ; Kendall & Hollon, 1989), the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980), and the Situational Self-Statement and Affective State Inventory (SSSASI; Harrell, Chambless, & Calhoun, 1981). These measures have strong psychometric properties and have a great deal of research supporting their utility in characterizing the cognitive content of depressed and anxious patients. However, they are limited by the fact that respondents are forced to endorse

the degree to which they experience a predetermined set of negative thoughts, rather than cognitions that are more relevant to their unique experience of depression and anxiety. Moreover, most of the items on these measures contain negative thoughts about future *situations*, leaving untouched the careful assessment of thoughts about future *emotional experiences*. R. Beck and Perkins also speculated that the shared method variance between self-reported cognitions and self-reported depressive and anxious symptoms might have confounded results.

Before it is concluded that cognitive content-specificity is associated with depression, but not anxiety, it is important to examine this issue using an assessment approach that yields open-ended responses and can be analysed using qualitative methods rather than an approach that requires respondents to endorse a predetermined set of items and compares mean scores between groups. In fact, R. Beck and Perkins (2001, p. 661) noted that the differential diagnosis of anxiety and depression "cannot be adequately resolved at present by the quantitative methods of cognitive-content specificity research." Thus, the primary aim of the present study was to adopt a qualitative approach to distinguishing specific domains of cognitive content between depressed and anxious patients. To accomplish this goal, written responses obtained from the Imagined Outcome Test (IOT; Beck et al., in press) were examined for 79 outpatients diagnosed with MDD, GAD, or other psychiatric disorders (PC; psychiatric controls). In the IOT, patients were instructed to describe their most bothersome problem. Subsequently, they imagined the worst possible negative outcome followed by the best possible positive outcome to this problem, and they described associated thoughts and emotions for each scenario. Cognitive content yielded from this task was coded for (a) types and severity of problems identified in the IOT (e.g. health, interpersonal); (b) the presence or absence of hopelessness and catastrophizing, as indicated by the patients' imagined worst outcome description; (c) the presence or absence of hopefulness and unrealistic positive expectations indicated by the patients' imagined best outcome description; and (d) emotions associated with imagined worst as well as best outcome.

Hypotheses for this study were as follows. First, it was expected that, relative to GAD and PC patients, more MDD patients would describe worst outcomes that reflected hopelessness and fewer MDD patients would describe best outcomes that reflected hopefulness. Second, it was predicted that, relative to MDD and PC patients, more GAD patients would describe worst outcomes that reflected catastrophizing. Third, it was hypothesized that, for descriptions of worst case scenarios, more MDD patients would anticipate emotions associated with sadness relative to patients in the other groups and that more GAD patients would anticipate emotions associated with anxiety relative to patients in the other groups. For descriptions of best case scenarios, it was expected that fewer MDD patients would anticipate emotions associated with happiness relative to patients in the other groups. In other words, we predicted that results from our qualitative analyses would be consistent with cognitive content-specificity for both depression and anxiety in 2 domains – characteristics of anticipated life situations and anticipated emotional experiences.

Method

Participants

Data for a total of 79 patients recruited from the University of Pennsylvania's Center for Cognitive Therapy (CCT) was analysed for this study. This sample was a subset of available data from the 149 patients originally recruited between 1983 and 1986 and the focus of the Beck et al. (in press) study. Unfortunately, the records of the other 70 patients had been destroyed as part of a routine research file clean-up at the laboratory. Psychiatric diagnoses were assigned by postdoctoral research fellows who administered the Structured Clinical Interview for DSM-III Axis I Disorders (Spitzer & Williams, 1983). Symptoms were reviewed by a senior-level supervisor to check for diagnostic agreement. Inter-rater reliabilities of 82% for diagnoses of MDD ($\kappa=0.72$) and 86% for diagnoses of GAD ($\kappa=0.79$) were previously reported for a larger group from which this sample was pooled (Riskind, Beck, Berchick, Brown, & Steer, 1987).

Diagnostic classifications resulted in a total of 36 patients with the diagnosis of Major

Depressive Disorder (MDD), 10 with Generalized Anxiety Disorder (GAD), and 33 with various other psychiatric diagnoses (psychiatric control; PC). Primary diagnoses in the PC group were distributed as follows: 48% adjustment disorder ($n=16$), 15% sexual dysfunction/deviance ($n=5$), 18% ($n=6$) other disorders (i.e. substance abuse/dependence, bipolar, panic, intermittent explosive, and obsessive compulsive), and another 18% ($n=6$) had a v code diagnosis. Within the adjustment disorder group, 2 individuals had an adjustment disorder with depressed mood, 10 had an adjustment disorder with mixed anxiety and depressed mood, and 3 had an adjustment disorder unspecified. There were no GAD patients with comorbid MDD. However, the case of 1 patient with a primary diagnosis of MDD and a secondary diagnosis of GAD was excluded from the analyses. Comorbid Axis I and/or Axis II diagnoses were present in 50% of the GAD group, 47% of the MDD group, and 45% of the PC group. Axis II diagnoses were assigned by the treating clinician at CCT. Groups did not differ in their rates of comorbidity.

The mean age for patients was 34.6 (standard deviation (SD)=11.2) years, 52% were female, 85% were Caucasian, 58% had a college degree or higher, and 42% were married. Approximately 52% of the patients were employed, whereas 20% were students, and 20% were unemployed; the additional 8% did not report employment status. There were significant gender, $\chi^2(2)=6.84$, $p=0.03$, and employment status, $\chi^2(2)=17.80$, $p=0.02$, differences amongst groups. Female patients accounted for 40% of the GAD group, 66% of the MDD group, and 36% of the PC group. Unemployment was reported by 36% of the MDD group, 0% of the GAD group, and 9% of the PC group.

Procedure

Individuals seeking outpatient psychiatric services at CCT participated in a standard intake evaluation. The assessment battery included the following self-report measures: the Beck Depression Inventory (BDI; Beck & Steer, 1987), the Beck Anxiety Inventory (BAI; Beck & Steer, 1990), the Beck Hopelessness Scale (BHS; Beck et al., 1974), and the Scale for Suicidal Ideation (SSI; Beck & Steer, 1991). In addition, the Hamilton Rating Scale for

Depression-Revised (HRSD-R; Hamilton, 1960) and the Hamilton Anxiety Rating Scale – Revised (HARS-R; Hamilton, 1959) were administered. Inter-rater reliabilities of 0.89 for the HARS-R and 0.90 for the HRSD-R have been reported (Hamilton, 1959, 1960).

Patients also completed the Imagined Outcome Test (IOT; Beck et al., in press), in which they were instructed to describe their most bothersome problem. Subsequently, they were asked to imagine the worst possible negative outcome followed by the best possible positive outcome to this problem, and they described associated thoughts and emotions for each scenario. Patients were then asked to rate the probability that each outcome would occur on a scale of 0–100 (see results reported by Beck et al., in press).

Data coding and statistical analyses

Responses for each imagined outcome scenario were coded for the following content-based categories: (a) problem type, (b) problem difficulty level, (c) morbid content, (d) associated emotions for worst (i.e. depression-related, anxiety-related, anger-related, general distress-related) and best (i.e. relief, happiness, excitement, surprise) outcome(s), and (e) associated cognitions for worst (i.e. hopelessness, catastrophizing) and best (i.e. hopefulness, unrealistic positive outcome) outcome(s). Two independent coders were trained to use this coding scheme designed by study investigators. Initial ratings were conducted to refine coding instructions and to achieve higher rates of consensus until a Cohen's kappa of 0.70 was reached based on

35 cases and 140 coded items. Disagreements on the reliability coding were resolved by a consensus discussion between the 2 raters and a coding supervisor. The overall inter-rater reliability was a Cohen's kappa of 0.80 based on 79 cases. Qualitative analyses were performed using the N6 (formerly, NUD*IST) software program.

Results

Scores on measures of psychiatric symptoms

Significant group differences on measures of psychiatric symptoms, based on a sample size of 149 patients, have been reported by Beck et al. (in press). The analyses on a subgroup of the original sample ($n=79$) performed here produced the same pattern of results. Table 1 displays scores on measures of psychiatric symptoms by group. There were significant differences among groups on the BDI, $F(2, 70)=22.97$, $p<0.001$; the BHS, $F(2, 64)=7.84$, $p<0.001$; the BAI, $F(2, 69)=8.13$, $p<0.001$; the HRSD-R, $F(2, 71)=38.14$, $p<0.001$; the HARS-R, $F(2, 60)=11.86$, $p<0.001$; and the SSI, $F(2, 69)=8.91$, $p<0.001$. *Post hoc* Tukey-Kramer¹ tests as well as Bonferroni tests indicated that patients with MDD scored higher on the BDI, the BHS, and the HRSD-R as compared to patients with GAD ($p<0.001$; $p<0.05$; $p<0.001$ respectively), and as compared to PC patients ($p<0.001$; $p<0.003$; $p<0.001$). Both MDD and GAD patients scored higher on the BAI and the HARS-R as compared to the PC patients ($p<0.05$). Patients to MDD

Table 1. Scores on measures of psychiatric symptoms.

	MDD ¹ ($n=36$)	ES ¹²	GAD ² ($n=10$)	ES ²³	PC ³ ($n=33$)	ES ¹³
BDI	26.16 (7.20) ^b	1.6	15.11 (6.45) ^a	0.20	13.57 (8.26) ^a	1.7
BHS	12.34 (4.30) ^b	1.1	7.56 (4.50) ^a	0.09	7.96 (4.82) ^a	0.98
BAI	19.10 (9.35) ^b	0.72	26.33 (13.06) ^b	1.4	12.13 (9.71) ^a	0.74
HRSD-R	18.13 (4.42) ^b	1.7	10.78 (4.99) ^a	0.49	8.74 (4.09) ^a	2.2
HARS-R	23.81 (8.19) ^b	0.31	21.57 (3.69) ^b	1.1	13.82 (7.84) ^a	1.3
SSI	3.84 (4.89) ^b	0.56	1.33 (3.28)	0.83	0.07 (0.26) ^a	1.1

Values with different superscripts are significantly different at $p<0.05$.

MDD=major depressive disorder; GAD=generalized anxiety disorder; PC=psychiatric control; ES=effect size; BDI=Beck Depression Inventory; BHS=Beck Hopelessness Scale; BAI=Beck Anxiety Inventory; HRSD-R=Hamilton Rating Scale for Depression-Revised; HARS-R=Hamilton Anxiety Rating Scale – Revised; SSI=Scale for Suicidal Ideation.

scored higher than PC patients on the SSI ($p < 0.001$). Since gender and employment status were found to be different across diagnostic groups, we further analysed for their status as covariates in an ANCOVA model. All scores on psychiatric measures still significantly differed by diagnosis, even after adjusting for these 2 variables.

Problem type and severity

There were no significant differences among groups on the types and severity of life problems reported in the IOT (see Table 2 for the percentage of the types of problems reported by patients). Interpersonal difficulties accounted for the most problems reported in each group (approximately 50%), followed by problems with employment (approximately 20%).

Cognitive content and associated emotions

The content of the worst outcome scenarios were coded for levels of hopelessness and catastrophizing, and the content of the best outcome scenarios were coded for levels of hopefulness and unrealistic positive outcome. Chi-square analyses indicated that the 3 groups were comparable across all these domains. In addition, there were no significant differences among groups on morbid thought content.

Associated emotions for the worst outcome scenario were coded for the following content:

sadness, anxiety, anger, or other. Significant differences among groups were obtained for the emotion of anxiety $\chi^2(2) = 11.63, p = 0.003$. A greater proportion of patients with GAD (80%, $n = 8$) anticipated future anxious emotions compared with those with MDD (22%, $n = 8$) or PC (33%, $n = 11$). Associated emotions for the best outcome scenarios were coded for the following content: relief, happiness, excitement, surprise, or other. Significant differences among groups were obtained for the emotion of happiness $\chi^2(2) = 6.35, p = 0.042$. In this case, a lower percentage of patients with MDD (33%, $n = 12$) expected future happiness compared with those with GAD (50%, $n = 5$) or PC (55%, $n = 21$). Additional analyses using gender and employment as covariates did not alter these findings.

Correlational analyses

Due to our sample size for each diagnostic group and the fact that almost half of our PC group consisted of individuals with an adjustment disorder diagnosis, we decided to run additional exploratory analyses combining all 3 diagnostic groups. Tables 3 and 4 present correlations of scores on depression and anxiety measures with scores on various domains of cognitive content. Depressive symptoms on the BDI, BHS, and HRSD-R were negatively correlated with anticipated happiness associated with imagined best outcomes. In addition, depressive symptoms on the BHS and HRSD-R were positively correlated with hopeless and catastrophic thought

Table 2. Percentage of the types of problems reported in the Imagined Outcome Test.

Problem type	MDD ($n = 36$)	GAD ($n = 10$)	PC ($n = 33$)
Illness	19.4	20.0	9.1
Physical	2.8	0.0	3.0
Psychiatric	16.7	20.0	9.1
Employment	22.2	20.0	18.2
Interpersonal	50.0	50.0	45.5
Spouse/partner	25.0	10.0	24.2
Children	2.8	10.0	6.1
Other family	0.0	0.0	3.0
Friendships	2.8	0.0	3.0
Other	25.0	40.0	21.2
Housing	2.8	0.0	0.0
Educational	11.1	20.0	3.0
Other	25.0	20.0	48.5

MDD=major depressive disorder; GAD=generalized anxiety disorder; PC=psychiatric control.

Table 3. *Correlations of depressive symptoms with cognitive content (n=79).*

Variables	1	2	3	4	5	6	7	8	9	10	11
1. BDI	–										
2. BHS	0.62**	–									
3. HRSD-R	0.78**	0.55**	–								
4. Morbidity	0.12	0.10	0.24*	–							
5. Hopelessness	0.06	0.24*	0.24*	0.20	–						
6. Catastrophizing	0.06	0.25*	0.25*	0.24*	0.59**	–					
7. Predicted Sadness	-0.09	-0.07	-0.10	-0.16	0.03	-0.12	–				
8. Predicted Anxiety	-0.07	-0.04	-0.07	-0.07	0.01	-0.04	-0.21	–			
9. Hopefulness	0.10	-0.04	0.13	0.09	0.20	0.15	-0.17	-0.05	–		
10. UPO	0.005	0.11	0.05	0.12	0.17	0.13	-0.08	0.15	0.08	–	
11. PH	-0.29*	-0.38**	-0.34**	-0.16	0.03	0.09	-0.07	-0.11	0.16	0.05	–

* $p < 0.05$; ** $p < 0.01$ (2-tailed).

BDI=Beck Depression Inventory; BHS=Beck Hopelessness Scale; HRSD-R=Hamilton Rating Scale for Depression-Revised; PH=Predicted Happiness; UPO=Unrealistic Positive Outcome.

content. Anxiety symptoms as measured by the HARS-R were positively correlated with catastrophic thought content and negatively correlated with anticipated happiness associated with imagined best outcomes.

Discussion

The present study was designed to advance our theoretical understanding of the cognitive content-specificity model by applying qualitative methods to examine open-ended responses reflecting depressive and anxious thought content reported by a subsample ($n=79$) of patients in Beck et al.'s (in press) quantitative report. Beck et al. (in press) found that relative to patients in the other groups, MDD patients estimated higher likelihoods of worst outcomes and lower likelihoods of best outcomes to

specific life problems and that these ratings were associated with depressive symptoms, but not anxious symptoms. They suggested that such hopelessness about specific life problems adds to a large literature indicating that hopelessness is a cognitive marker that is unique to depression. Our study is an important extension of the Beck et al.'s (in press) report because it directly examines the content of the language used by patients to describe cognitions. Results from the present study demonstrate that while depressed and anxious patients report similar types and characteristics of expected life problems, they differ in 1 important aspect of their descriptions of future worst and best outcomes. Relative to patients in the other groups, MDD patients were less likely to anticipate happiness associated with their future best outcomes, and GAD patients

Table 4. *Correlations of anxiety symptoms with cognitive content (n=79).*

Variables	1	2	3	4	5	6	7	8	9	10
1. BAI	–									
2. HARS-R	0.68**	–								
3. Morbidity	0.18	0.20	–							
4. Hopelessness	0.00	0.17	0.20	–						
5. Catastrophizing	0.00	0.27*	0.24*	0.59**	–					
6. Predicted Sadness	-0.19	-0.18	-0.16	0.03	-0.12	–				
7. Predicted Anxiety	0.14	0.13	-0.07	0.01	-0.04	-0.21	–			
8. Hopefulness	-0.06	0.09	0.09	0.20	0.15	-0.17	-0.05	–		
9. UPO	0.01	0.16	0.12	0.17	0.13	-0.08	0.15	0.08	–	
10. PH	-0.15	-0.26*	-0.16	0.03	0.09	-0.07	-0.11	0.16	0.05	–

* $p < 0.05$; ** $p < 0.01$ (2-tailed).

BAI=Beck Anxiety Inventory; HARS-R=Hamilton Anxiety Rating Scale - Revised; PH=Predicted Happiness; UPO=Unrealistic Positive Outcome.

were more likely to anticipate anxiety associated with their future worst outcomes.

Based on our knowledge of the cognitive content-specificity literature, we were surprised that hopelessness did not characterize the worst outcome responses of depressed patients and that catastrophizing did not characterize the worst outcome responses of anxious patients. However, it is important to acknowledge that our coding for hopelessness and catastrophizing focused on future *life events*, whereas significant group differences were noted for future *emotional states*. The MDD patients were not hopeless about the outcome of future life events. Instead, they anticipated a paucity of happy emotions, which could indicate hopelessness about the possibility of improved affect. The GAD patients, similarly, did not exaggerate the negative outcome of future life events. Instead, they anticipated anxious emotions, which could indicate catastrophizing about the exacerbation of their worry. Thus, our data suggest that depressed and anxious patients differ in their cognitive expectancies about future internal affective states instead of future external events. These results raise the possibility that the lack of anticipated happiness is another cognitive marker that may be unique to depression and that anticipated anxiety is another cognitive marker that may be unique to generalized anxiety.

In all, these findings provide partial support for the cognitive content-specificity model of depression and anxiety, as depressed and anxious patients could be distinguished by their estimation of future emotional states, but not by the hopelessness and catastrophizing reflected in their imagined outcomes of specific life events. Moreover, these results highlight that cognitive phenomena occur at multiple layers, including images, self-statements, anticipated outcomes, and associated emotions that are predicted when thinking about future events. Our findings advance the existing literature on cognitive content-specificity by suggesting that a layer of expectancies for future emotional experiences may differentiate diagnostic groups to the greatest degree. Studies using self-report inventories that yield a general score for cognitive content by combining expectancies for the outcome of future events, interpersonal difficulties,

self-appraisals of competency, and affective and behavioural responses to such events may have produced mixed results because such scores obscure the domains that are more likely to differentiate diagnostic groups.

Another useful conceptual framework for examining our findings is the tripartite model² of anxiety and depression (Clark & Watson, 1991). In this model, negative affect (NA) is proposed to be associated with both anxiety and depression, whereas positive affect (PA) and physiological hyperarousal (PH) are proposed to differentiate between anxiety and depression. The absence of PA or low PA are viewed as specific to depression and PH is viewed as specific to the state of anxiety. In our study, the lack of anticipated happiness ("zest for life" as described by Clark & Watson, p. 321) may be viewed as indicative of low positive affect unique to depression. The anticipated anxiety may be viewed as indicative of PH as well as a state of high NA. Researchers who examine psychometric evidence for the tripartite model are encouraged to use qualitative strategies to further evaluate properties of anxiety and depression.

Strengths of this study include: (i) the use of different methodological approaches to assess psychiatric symptoms and cognitive content, which reduces the confound of common method variance; and (ii) the development of a theoretically based coding system designed to elucidate specific domains of depressive and anxious cognitive content. However, several limitations of this research design that bear on interpretation of results also must be acknowledged. First, this study considered only a subset of the archival data used in the Beck et al. (in press) study and therefore utilized measures commonly used in the mid-1980s. The sample sizes, especially for the GAD group in particular, were small. In addition, the sample consisted of mostly Caucasian patients, and significant group differences in gender and employment status were found. Future studies with larger sample sizes, better representation of minority groups, more up-to-date instruments, and an equal distribution of men and women as well as employed and unemployed participants will ensure maximum generalizability and overall improvement on the study quality.

Furthermore, our sample consisted of individuals who had a “pure” GAD or MDD diagnosis based on DSM-III criteria. Utilizing DSM-IV criteria for diagnostic classification as well as including a third comparison group consisting of outpatients with comorbid GAD and MDD diagnoses may provide future researchers with more refined data about similarities and differences in cognitive styles of anxious and depressed individuals and the hierarchy of specific domains of maladaptive cognitive content that are reported when both types of symptoms are present. Finally, we need to emphasize that our study obtained a limited sampling of the participants’ cognitions. For instance, the IOT required participants to respond to a fixed list of questions and we did not directly assess for specific images associated with future best and worst possible outcomes. Future researchers are encouraged to develop unique strategies to gain a more in-depth glimpse into anxious and depressed individuals’ cognitive processes.

Whereas quantitative studies provide the means for hypothesis testing, qualitative studies can provide us with a richer understanding of theoretical underpinnings of psychological models and can generate hypotheses to be tested in future studies. An examination of patients’ specific language in describing their life problems and expectancies for future worst and best outcomes provides a different strategy to assess cognitive differences amongst patients with various psychiatric disorders. Unlike forced responses on psychiatric measures, patients are provided with the freedom to express their thinking process in detail. The results of this study demonstrate that MDD and GAD patients have disorder-specific cognitive profiles that occur at a level not yet considered at length in the literature – anticipated emotional experiences. This distinction presents a unique contribution to the refinement of cognitive content-specificity literature by suggesting that a layer of expectancies for future emotional experiences may differentiate diagnostic groups to the greatest degree. We encourage future researchers to test this hypothesis *a priori* using an empirical approach that is designed with the purpose of distinguishing among specific domains of cognitive content in depressed and anxious patients.

Notes

1. To address the problem of conducting *post hoc* comparisons with groups that differ in sample size and variance, we carried out the Games-Howell test in SPSS. The Tukey-Kramer findings did not differ from the Games-Howell.
2. We are grateful to an anonymous reviewer for directing our attention to the tripartite model.

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