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Beliefs in Obsessive-Compulsive Disorder

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Abstract—Several types of beliefs have been hypothesized to be associated with obsessive-compulsive disorder (OCD), including responsibility for harm, need to control thoughts, overestimates of threat, intolerance of uncertainty, and beliefs about the consequences of anxiety and capacity to cope. The present study compared 62 subjects with OCD, 45 with other anxiety disorders (AD) and 34 controls, using 3 measures of OCD-related beliefs. OCD subjects scored higher than AD and control samples on 2 general belief measures. A closer analysis of specific belief domains indicated that OCD subjects scored higher than AD and control subjects on all 6 specific belief domains (responsibility, control, estimation of threat, tolerance of uncertainty, beliefs about the consequences of anxiety, and the capacity to cope). Four of the 6 domains showed reasonable convergent and discriminant validity with measures of OCD symptoms compared to other psychopathology; anxiety and coping beliefs were the exceptions. In regression analyses, cognitive measures contributed significant explanatory power beyond mood state and worry with uncertainty predicting severity of OCD symptoms above all other belief domains. Further research on OCD-relevant belief domains in etiology, maintenance and treatment is warranted. © 1998 Elsevier Science Ltd

Cognitive factors in obsessive-compulsive disorder (OCD) have generated considerable interest in the recent past. A number of cognitive models link

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dysfunctional beliefs to OCD (McFall & Wollersheim, 1979; Salkovskis, 1989; Tallis, 1995). From these theories have developed several cognitive treatments that attempt to modify dysfunctional beliefs in OCD (Freeston, Rhéaume, & Ladouceur, 1996; van Oppen & Arntz, 1994). Because of the growing importance of cognitive factors for understanding and treating OCD, a closer examination of these factors is warranted.

Several belief domains have figured prominently in theorizing and/or research on OCD. Appraisal of *inflated responsibility for harm* is the cornerstone of Salkovskis's (1985) cognitive theory of OCD. He proposed that normal intrusive thoughts, images, and impulses lead to disturbance when they are particularly salient for the individual and are associated with negative automatic thoughts and discomfort about being responsible for danger or harm to others or self. Compulsive rituals are attempts to neutralize the discomfort and responsibility. The importance of responsibility has been demonstrated in several studies of compulsive activities in nonclinical and clinical subjects (e.g., Rachman, Thordarson, Shafran, & Woody, 1995; Rhéaume, Freeston, Dugas, Letarte, & Ladouceur, 1995). Salkovskis (1985) has generated a self-report measure of this domain, the Responsibility Scale. However, as yet, little work using this scale has been published.

Several theorists have suggested that beliefs about the *controllability of thoughts* are important in individuals with OCD. Wegner (1989) proposed that processes such as thought suppression and ignoring represent efforts to control intrusive thoughts among OCD clients, but may in fact increase their frequency. In Salkovskis's (1989) theory, meta-cognitive beliefs about the need for mental self-control affect appraisal of one's thoughts and contribute to the development of OCD. Likewise, Clark and Purdon (1993) have presented a cognitive model focusing on dysfunctional meta-cognitive beliefs concerning the need to control thinking and a general breakdown in the ability of obsession-prone people to control their mental activity. Few studies have examined beliefs about control, however.

Many OCD clients are thought to *overestimate the threat* of negative consequences with regard to the likelihood of aversive events, as well as their severity (Carr, 1974; Foa & Kozak, 1986; Salkovskis, 1985; Steiner, 1972). Kozak, Foa, and McCarthy (1987) suggested a reason for this bias, that people with OCD have difficulty with epistemological reasoning related to their excessive fear of harm, viewing obsessive situations as dangerous until proven safe. Few empirical studies have examined the role these beliefs play in OCD. A recent study found that people who score high on obsessive symptoms, as well as those diagnosed with OCD, preferred to avoid taking even ordinary daily risks, such as leaving a car unlocked very briefly or drinking out of a friend's cup (Steketee & Frost, 1994). However, recently Simos, Vaiopoulos, Giouzeapas, and Parasehos (1995) failed to find a difference in the probability estimation of dangerous events as a function of scores on the revised Maudsley Obsessional Compulsive Inventory. Further research on the nature of this belief in OCD is warranted.

Researchers have noted that *intolerance for uncertainty* and indecision are central cognitive features of OCD (Carr, 1974; Guidano & Liotti, 1983; Kozak et al., 1987). In addition, Beech and Liddel (1974) proposed that ritualistic behaviors are maintained not only to reduce immediate discomfort, but to partly address the need for certainty before terminating an activity. Evidence supporting such cognitive problems derives from research showing that OCD subjects were more cautious, took longer to categorize objects, requested information more frequently, and doubted their decisions (see Steketee, Frost, Rhéaume, & Wilhelm, 1998, for review). Most of this research has concentrated on the symptom of uncertainty rather than on beliefs about uncertainty. The present study focused on the latter.

Two additional cognitive areas may pertain to OCD. *Beliefs about discomfort/anxiety* have been hypothesized to play an important role in determining OCD responses, in that patients with OCD may believe that anxiety is intolerable and will lead to severe consequences (Foa & Kozak, 1986; Freeston et al., 1996). According to Salkovskis (1985), neutralization (rituals) is used to reduce discomfort, responsibility, and possible feared consequences. Almost no data exist on the importance of attitudes or interpretations about discomfort/anxiety. Guidano and Liotti (1983) have also suggested that OCD patients underestimate their *ability to cope* with threatening situations, resulting in pervasive uncertainty and discomfort. OCD patients appear to be more likely to view rituals and avoidance as their only available coping strategy. Again, few studies address this topic. Both of these belief domains are also likely to characterize other anxiety-disordered patients (see Foa & Kozak, 1986) and may not differentiate OCD from other anxiety disorders.

Thus, several OCD-related beliefs have been described in the literature, although to date few studies have examined these beliefs. In the present study, we sought to extend research on OCD beliefs by comparing these beliefs among OCD patients, other anxiety-disordered patients, and nonclinical controls. Two general measures of OCD beliefs were studied: the Inventory of Beliefs Related to Obsessions (IBRO; Freeston, Ladouceur, Thibodeau, & Gagnon, 1994) and a newly generated Obsessive Compulsive Beliefs Questionnaire (OCBQ; see measures below.). Freeston et al. (1993) developed the IBRO as a general measure of OCD beliefs. The IBRO was related to OCD symptoms in nonclinical populations, and differentiated OCD patients from nonclinical controls. The OCBQ is a newly developed measure of OCD beliefs. In addition to a total score, the OCBQ contains 6 specific belief domains hypothesized to be related to OCD. These are responsibility for harm, controllability of thoughts, overestimation of risk, need for certainty, beliefs about discomfort/anxiety, and beliefs about one's ability to cope. A second measure of responsibility (R-Scale; Salkovskis, 1995) was also included. In addition to comparing the 3 groups on each of these measures, in the present paper we examined the relationship of each of these domains with OCD symptoms. In addition, measures of depression, anxiety sensitivity, and worry were

also collected in order to assess the extent to which hypothesized OCD beliefs were related to these mood disturbances commonly found in OCD and other anxiety disorders.

METHODS

Sample

Clinical subjects were solicited from area mental health clinics and through the Anxiety Disorders Association of America and the Obsessive Compulsive Foundation newsletters. Included were patients who reported that they had received a diagnosis of OCD or of another anxiety disorder (AD) from a mental health professional with whom they were currently in treatment for this condition. Because we did not have the resources to conduct formal standardized diagnostic interviews, we sought to provide a check on diagnosis. To this end we excluded OCD patients if their Yale Brown Obsessive Compulsive Scale (YBOCS) scores were less than 10 (just above the mean for normals; Steketee, Frost, & Bogart, 1996) and Padua Inventory scores were less than 20 (the mean for normals; van Oppen et al., 1995). AD subjects were excluded if YBOCS scores were 16 or greater (the clinical cut-off score in medication trials for OCD) and Padua scores were 30 or greater (conservative criteria based on mean scores for other anxiety subjects; van Oppen et al., 1995). For controls, the exclusion criterion was a YBOCS score of 16 or greater; no Padua scores were available for control subjects. Using these criteria, we excluded 8 OCD subjects, 7 AD subjects, and 3 controls. The final sample consisted of 62 OCD subjects, mean age was 41.8 years ($SD = 12.6$), of whom 68% were female. The AD sample included 45 patients with a mean age of 46.4 years ($SD = 12.7$); 84% were female. Among the AD sample were 13 with panic disorder, 11 with panic/agoraphobia, 11 with generalized anxiety disorder, 7 with social phobia, and 7 with agoraphobia alone. The control group of 34 subjects (mean age was 30.8 years [$SD = 11.1$], 84% female) included graduate student and employee volunteers who were not seeking mental health treatment. The two patient samples were comparable in age, but controls were significantly younger than both clinical groups, $F(2, 118) = 14.46$, $p < .001$. Chi-square analysis indicated no significant differences between clinical patients in gender balance.

Measures

Upon agreement to participate, subjects received a packet of self-report measures that included the following instruments. To assess beliefs, we developed the Obsessive-Compulsive Belief Questionnaire (OCBQ) using items modified from existing cognitive instruments and new ones generated by the

first two authors. These items were designed to capture six theoretically derived cognitive domains: responsibility for harm, control of thoughts, threat estimation, tolerance for uncertainty, beliefs about discomfort/anxiety, and beliefs about coping. Items had a 7-point Likert-type format from “disagree very much” to “agree very much”; higher scores reflected more OC beliefs. The first four of these (but not anxiety and coping) were identified by the Obsessive Compulsive Cognitive Working Group (1997) as central to OCD. A total of 129 items were piloted on a sample of 67 undergraduate college students. Items were discarded for restricted range, low item-subscale correlations and lack of relationship to the YBOCS. The revised scale contained 90 items comprising six subscales, which were logically derived based on the theoretical literature on beliefs in OCD. Two other measures of beliefs were included: the 20-item Inventory of Beliefs Related to Obsessions (IBRO; Freston et al., 1993) and the 27-item Responsibility Scale (R-Scale; Salkovskis, 1985). Total scores summing across all items for the OCBQ and the IBRO represented global measures of OCD-related beliefs. The subscales of the OCBQ and the R-Scale represented more specific belief domains.

The severity of OCD symptoms was assessed with the 41-item version of the Padua Inventory-Revised (Padua; van Oppen et al., 1995) and the self-report version (see Steketee et al., 1996) of the YBOCS (Goodman et al., 1989). Control subjects did not complete the Padua due to methodological error.

Measures of other forms of psychopathology for purposes of assessing construct validity included the Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky, & McNally, 1986), the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990).

RESULTS AND DISCUSSION

Internal Consistency and Scale Intercorrelations

As Table 1 shows, most of the six subscales of the OCBQ showed good to very good internal consistency in patient samples. However, the alphas for Tolerance for Anxiety and for the Responsibility subscale were modest. Internal consistencies for the total OCBQ (.97), IBRO (.87), and Responsibility-Scale (.93) were very good to excellent.

Subscales of the OCBQ were generally highly interrelated as evident in Table 1. Correlations ranged from .51 to .82 indicating substantial overlap in these constructs.

Comparison Among OCD, AD, and Control Samples

Mean scores on OCD symptom and cognitive measures are given in Table 2. As expected, based on selection criteria, OCD subjects were clearly distinguishable by much higher scores on the Padua, $F(1, 100) = 103.11, p < .001$,

TABLE 1
INTERNAL CONSISTENCY AND INTERSCALE CORRELATIONS (PEARSONS) FOR OCBQ SUBSCALES FOR
OCD, AD, AND CONTROL SUBJECTS ($N = 141$)

	Responsibility	Control	Threat	Uncertainty	Anxiety	Coping
Responsibility (10 items)	(.80)	.82				
Control (14 items)	.82	(.88)				
Threat estimation (18 items)	.81	.74	(.88)			
Tolerance for uncertainty (15 items)	.80	.78	.82	(.87)		
Tolerance for anxiety (11 items)	.68	.67	.73	.76	(.80)	
Coping	.51	.53	.57	.60	.74	(.84)

Note. Numbers in parentheses are alphas.

AD = Anxiety disorder; OCBQ = Obsessive Compulsive Beliefs Questionnaire; OCD = obsessive compulsive disorder.

and on the YBOCS, $F(2, 132) = 96.08, p < .001$, than AD subjects who were similar to controls on the latter measure.

Using analyses of variance (ANOVAs) to compare groups on belief measures, OCD subjects scored higher than AD subjects and Controls on the OCBQ total score and all six subscales ($F_s \geq 21.16, p_s < .001$).¹ OCD subjects also scored higher than AD and Control subjects on the IBRO and the Responsibility-Scale ($F_s \geq 14.41, p_s < .001$). When age was included as a covariate in these analyses, all differences between diagnostic groups remained significant ($F_s \geq 12.10, p_s < .001$). The content domains studied appear to have greater relevance for OCD than for other anxiety disorders or nonanxious controls. As evident in Table 2, in post-hoc analyses using Tukey B, AD subjects did not differ from Controls on Responsibility for Harm (from the OCBQ subscale and R-Scale), Control of Thoughts, and Threat Estimation. AD subjects did score higher than controls on Tolerance for Uncertainty, Tolerance for Anxiety, and Beliefs About Coping, indicating that these three areas may be more prominent in OCD, but not unique features of that disorder.

¹Significant heterogeneity of variance among the groups existed for the OCBQ total, responsibility, control, and uncertainty subscales. Nonparametric tests (Kruskal-Wallis) revealed significant differences among the groups on these measures. Thus, these differences are not a function of heterogeneity of variance.

TABLE 2
 GROUP MEANS (*M*) AND STANDARD DEVIATIONS (*SD*) FOR SYMPTOM AND
 COGNITIVE MEASURES FOR OCD, ANXIETY DISORDER (AD), and
 CONTROL SUBJECTS

Measure	Subject Scores		
	OCD (<i>n</i> = 62)	AD (<i>n</i> = 45)	Control (<i>n</i> = 34)
Symptom measures			
YBOCS total			
<i>M</i>	21.17 ^a	7.00 ^b	6.25 ^b
(<i>SD</i>)	(6.56)	(4.94)	(6.34)
Padua Inventory			
<i>M</i>	61.82 ^a	20.02 ^b	
(<i>SD</i>)	(24.41)	(14.51)	
Cognitive Beliefs Measures			
OCBQ Total			
<i>M</i>	375.48 ^a	288.86 ^b	255.17 ^c
(<i>SD</i>)	(86.11)	(54.54)	(55.06)
Responsibility			
<i>M</i>	41.69 ^a	28.32 ^b	28.03 ^b
(<i>SD</i>)	(11.23)	(8.07)	(8.37)
Control			
<i>M</i>	44.36 ^a	31.16 ^b	27.29 ^b
(<i>SD</i>)	(16.69)	(10.56)	(10.54)
Threat estimation			
<i>M</i>	80.02 ^a	59.42 ^b	54.48 ^b
(<i>SD</i>)	(16.95)	(15.79)	(13.73)
Uncertainty			
<i>M</i>	63.41 ^a	49.52 ^b	41.68 ^c
(<i>SD</i>)	(16.26)	(12.83)	(11.06)
Anxiety			
<i>M</i>	53.98 ^a	45.56 ^b	32.43 ^c
(<i>SD</i>)	(10.17)	(8.91)	(10.16)
Coping			
<i>M</i>	18.58 ^a	15.33 ^b	10.03 ^c
(<i>SD</i>)	(6.16)	(6.02)	(4.89)
IBRO			
<i>M</i>	66.55 ^a	55.30 ^b	51.71 ^b
(<i>SD</i>)	(15.19)	(13.20)	(12.41)
R-Scale			
<i>M</i>	81.52 ^a	58.57 ^b	64.17 ^b
(<i>SD</i>)	(17.30)	(15.91)	(15.25)

Superscripts a, b, and c in the above table indicate significant differences between samples: a > b and b > c at $p < .05$.

IBRO = Inventory of Beliefs; OCBQ = Obsessive Compulsive Beliefs Scale; R-Scale = Responsibility Scale; YBOCS = Yale-Brown Obsessive Compulsive Scale.

TABLE 3
PEARSON CORRELATIONS AMONG MEASURES OF COGNITIVE BELIEFS

OCBQ	Cognitive Beliefs	
	IBRO	R-Scale
Total	0.79	0.74
Responsibility	0.70	0.73
Control	0.75	0.69
Threat estimate	0.69	0.69
Uncertainty	0.70	0.71
Anxiety	0.58	0.58
Coping	0.53	0.44
IBRO	—	0.59

Note. All correlations are significant at $p < .001$. Numbers range from 119 to 134 OCD, AD, and Controls combined.

IBRO = Inventory of Beliefs; OCBQ = Obsessive Compulsive Beliefs Scale; R-Scale = Responsibility Scale.

Correlation and Regression Analyses

Table 3 shows the correlations among OCD beliefs measures; p values are significant even with Bonferroni corrections for the number of correlations ($p < .0008$). The two global measures (IBRO and OCBQ total) were highly correlated ($r = 0.79, p < .0001$) indicating strong convergent validity. The Responsibility-Scale was also strongly correlated with the OCBQ responsibility subscale ($r = 0.74, p < .0001$). There was, however, considerable overlap among the subscales with correlations ranging from .51 to .82, indicating that these domains may be difficult to differentiate.

Table 4 shows the correlations of OCD beliefs measures with measures of OCD symptoms and with depression, anxiety sensitivity, and worry. All correlations were again significant using the Bonferroni correction ($p < .0008$). The OCBQ total, IBRO, OCBQ subscales, and the Responsibility Scale were correlated at least moderately with the YBOCS ($r_s = 0.40-0.65$) and strongly with the Padua ($r_s = 0.54-0.73$) supporting their association with OCD.

We tested differences between these correlations using t -tests for dependent correlations with the two clinical samples only, since controls did not complete the Padua. For the OCBQ total score and responsibility and threat subscales, correlations with the Padua were significantly higher than correlations with any of the three psychopathology measures, $t_s(97) \geq 2.48, p_s < .01$. For uncertainty, correlations with the Padua were significantly higher than with depression and anxiety sensitivity ($p < .05$) and for anxiety, Padua correlations were higher than with anxiety sensitivity and worry ($p_s < .01$). Only the control and coping subscales failed to show a stronger association with the

TABLE 4
PEARSON CORRELATIONS OF MEASURES OF BELIEFS WITH MEASURES OF
OCD SYMPTOMS AND OTHER PSYCHOPATHOLOGY ($N = 136$)

	OCD Symptoms		Psychopathology		
	YBOCS	Padua ^a	BDI	ASI	PSWQ
OCBQ total	0.60	0.71	0.54	0.56	0.59
Responsibility	0.54	0.68	0.39	0.49	0.49
Control	0.46	0.63	0.43	0.52	0.43
Threat estimate	0.56	0.68	0.42	0.48	0.56
Uncertainty	0.57	0.63	0.47	0.53	0.58
Anxiety	0.65	0.71	0.64	0.58	0.60
Coping	0.54	0.50	0.65	0.41	0.66
IBRO	0.40	0.54	0.43	0.41	0.40
R-Scale	0.54	0.73	0.44	0.41	0.52

Note. All correlations significant at $p < .0001$.

ASI = Anxiety Sensitivity Index; BDI = Beck Depression Inventory; IBRO = Inventory of Beliefs Related to Obsessions; OCBQ = Obsessive-Compulsive Beliefs Questionnaire; PSWQ = Penn State Worry Questionnaire; R-Scale = Responsibility Scale; YBOCS = Yale-Brown Obsessive Compulsive Scale.

^aControls did not complete the Padua.

Padua than with other measures. Unlike the Padua correlations, OCBQ scales were not more strongly related to YBOCS scales than to other pathology measures.

We conducted a series of forward and stepwise regression analyses on the combined sample to determine whether general beliefs measures explained significant variance in OCD symptoms beyond that accounted for by measures of other pathology. Because of missing data on the Padua, the YBOCS served as the criterion variable. The measures of depression, anxiety sensitivity, and worry were entered first, followed by the IBRO, and OCBQ total score in any order (Table 5). Of these the OCBQ total score explained significant variance beyond the measures of depression, anxiety and worry, significantly increasing the adjusted R^2 ($F = 14.75$, $p < .0002$). These regression analyses argue that beliefs do account for substantial additional variance in OC symptom scores beyond mood and worry. To determine whether particular belief domains explained significant variance in OCD symptoms beyond other psychopathology, we conducted a second mixed model regression analysis on YBOCS scores. The depression, anxiety sensitivity, and worry scores were again entered first, followed by forward entry of the 6 subscales of the OCBQ. The Tolerance for Anxiety Subscale captured most of the variance, $\beta = .61$. Other betas for BDI, ASI, and PSWQ were below .17. The adjusted R^2 was .45, $F(4, 101) = 20.63$, $p < .0001$. Because the anxiety belief items of the OCBQ,

TABLE 5
REGRESSION ANALYSES OF MEASURES OF BELIEFS AND PSYCHOPATHOLOGY
USING YBOCS AS THE CRITERION

Measures	β	Adjusted R^2 ^a	F	df	p
Regression analysis with IBRO and OCBQ total score included					
BDI	.23				
ASI	-.13				
PSWQ	.13	.26	12.64	3,98	.0001
OCBQ total	.44	.35	14.50	4,97	.0001
Regression analysis with subscales of the OCBQ included, excepting Tolerance for Anxiety and Coping					
BDI	.45				
ASI	.08				
PSWQ	.32	.25	12.84	3,102	.0001
Uncertainty	.44	.36	15.75	4,101	.0001

ASI = Anxiety Sensitivity Index; BDI = Beck Depression Inventory; IBRO = Inventory of Beliefs Related to Obsessions; OCBQ = Obsessive-Compulsive Beliefs Questionnaire; PSWQ = Penn State Worry Questionnaire; YBOCS = Yale-Brown Obsessive Compulsive Scale.

^aData given is the adjusted R^2 and F for the combination of variables entered up to that point.

as well as the coping subscale, were too symptom-focused rather than belief-focused, as had been originally intended, we omitted these two scales in a subsequent regression and analysis. Results of this mixed model regression analysis are given in Table 5. Beliefs about uncertainty explained variance beyond that of mood and worry, significantly increasing the adjusted R^2 , $F(4, 101) = 18.05$, $p < .0001$. No other belief domain was accepted in the equation.

COMMENT

The present findings support the hypothesis that, on average, OCD patients hold beliefs about responsibility, control, threat estimation, tolerance of uncertainty, concern about anxiety/discomfort, and coping that are different from those of a nonclinical population. Furthermore, compared to other anxiety-disordered patients, OCD patients hold stronger beliefs in these domains. These findings were evident for general measures (IBRO and total OCBQ score), as well as for individual domains. Thus, these cognitive domains may have more relevance to OCD than to other anxiety disorders, although this may be less true of attitudes toward anxiety symptoms and coping capacity as noted below. The link of some of these domains to OCD has also been reported by other investigators. Responsibility has been shown by several researchers to be elevated in OCD patients compared to normal controls (Bouvard, Harvard, Ladouceur, & Cottraux, 1997; Cartwright-Hatton & Wells,

1997), particularly for low risk situations (Foa, Amir, Bogart, & Molnar, 1998), and compared to other patient groups (Cartwright-Hatton & Wells, 1997). Likewise, in experimental manipulations of responsibility, decreases in perceived responsibility were associated with decreased discomfort and urges to check (Lopatka & Rachman, 1995). There is limited evidence from other research that overestimation of threat characterizes OCD (Freeston et al., 1993; Steiner, 1972; Steketee & Frost, 1994). Other domains of control and uncertainty remain unstudied in clinical OCD populations.

Belief domains were also substantially correlated with measures of other symptoms, including depression, anxiety sensitivity, and worry. However, the correlations between most beliefs domains and OCD symptoms were generally larger than the correlations between beliefs and non-OCD symptoms, significantly so in the case of the Padua Inventory. Exceptions were beliefs about coping, which correlated more highly with depression and worry than OCD symptoms and were only modestly related to other measures of beliefs. Beliefs about anxiety were also more modestly related to other belief assessments, but strongly correlated with OCD symptoms. In reviewing the items comprising the anxiety domain, we suspect that they may capture OC symptom-focused anxiety more than independent beliefs about the effects of anxiety, and thus our results may be less relevant to OCD than our findings suggest. Indeed, beliefs/fears about coping capacity and ability to manage anxiety would be expected to occur across a variety of anxiety disorders besides OCD, and although not central for patients with OC, they may play some general role in the development and/or maintenance of this and other anxiety disorders (see also Foa & Kozak, 1986).

Of greater interest are beliefs about responsibility, control, risk estimation, and uncertainty. These domains were highly intercorrelated, indicating considerable overlap, as might be expected. For example, individuals who overestimate the risk of harm may also seek greater certainty and control to manage their fears. Those who exaggerate their own responsibility may well attempt to overcontrol thoughts and actions that they fear could cause harm. It is interesting and surprising that only uncertainty beliefs predicted YBOCS scores beyond mood and worry. Inaccuracies in assessment may have contributed to overlap in cognitive domains. Subscales were all highly intercorrelated, as evident in Table 1. It is also possible that intolerance of uncertainty is central to OCD, which has been called the "doubting disease" (Ciarrocchi, 1995).

Replication of this study with patients diagnosed with a structured interview would be useful. Future research should focus on creating assessment instruments that capture essential features of cognitive experience in OCD without confounding beliefs with symptoms and minimizing conceptual overlap among domains. Presently, the Obsessive Compulsive Cognitions Working Group (1997) has identified several of the above-discussed belief domains as central to OCD. Thus, our data are consistent with expert consensus in this

area. Two belief measures currently being piloted by the Obsessive Compulsive Cognitive Working Group assess these and other areas. Such efforts are likely to be useful in future research on OCD beliefs and in understanding their role in the development and maintenance of this disorder, as well as their influence in the treatment process.

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