

## Cognitive appraisal model of obsessive compulsive disorder (OCD): Recent advances

Emily Marie McHugh O'Leary

Department of Psychology, Canterbury University, Christchurch, New Zealand

---

### Abstract

Obsessive Compulsive Disorder (OCD) is classified as an anxiety disorder characterized by distressing persistent unwanted ideas or impulses (obsessions) and urges and/or compulsions to do something to relieve the associated anxiety caused by the obsession. According to the cognitive model, OCD is maintained by a number of cognitive beliefs and appraisal processes. The central tenet in most cognitive-appraisal based theories is that these dysfunctional beliefs are intrinsically linked with the expression of disordered thinking and behaviour. Recently, the Obsessive Compulsive Cognitions Working Group, (OCCWG; 1997, 2001, & 2003) have outlined six cognitive beliefs thought to be the most relevant in OCD: control of thoughts, importance of thoughts, responsibility, intolerance of uncertainty, overestimation of threat and perfectionism. This article provides a brief review of Salkovskis' cognitive-appraisal model and research from the Obsessive Compulsive Cognitions Working Group.

### Introduction

Cognitive-appraisal models are rationalistic in approach and emphasise the role of dysfunctional beliefs in psychological disorders. Specifically, cognitive-appraisal approaches focus on certain beliefs and meanings that drive and/or motivate psychological factors in the maintenance of disorders (Salkovskis, 1996). Most appraisal-based models of OCD are heavily influenced by Beck's (1976) cognitive specificity hypothesis. Beck (1976) followed Albert Ellis (1962) in proposing that

dysfunctional beliefs cause emotional disturbances because they affect the interpretation or appraisal of an event or situation. Further, the particular appraisal made will depend on the context in which an event occurs, the mood the person is in at the time it occurs, and the person's past experiences. Early theories such as Beck's (1976) were not specific to OCD, as many of the beliefs about danger found in OCD are also commonly found across all anxiety disorders (Salkovskis, 1985). These limitations precipitated a myriad of disorder-specific psychological theories investigating the different types of dysfunctional beliefs underlying affective disorders including social phobia (Clark & Wells, 1995) and OCD (Rachman, 1993; Salkovskis, 1985, 1989). Before discussing Salkovskis' (1985, 1989, and 1996) model of OCD, it is necessary to define the concepts that constitute the cognitive basis of OCD.

The following definitions are from the OCCWG (1997):

- (a) *Intrusions*: Unwanted thoughts, images, or impulses that intrude into consciousness and are called obsessions when they attain clinical severity.
- (b) *Appraisals*: Expectations, interpretations, or evaluations of the meaning of particular phenomena such as unwanted intrusive thoughts.
- (c) *Assumptions (beliefs)*: Relatively enduring ideas that are pan-situational and that may be specific to OCD or may be general assumptions about one's self, that

are relevant to other clinical disorders.

### Salkovskis' Cognitive Model of OCD

Salkovskis' (1985, 1989, 1996) theory is based on Beck's (1976) cognitive specificity hypothesis and Rachman and colleagues' spontaneous decay experiments (Rachman, De Silva & Roper, 1976). Salkovskis' (1985, 1989) model proposes that intrusive thoughts, like the ones experienced in the normal population, develop into clinical obsessions when the individual interprets the intrusions as implying high *personal responsibility* and significance (Clark, 2004). Inflated responsibility beliefs are given a central role in this theory and are defined as:

*“The belief that one has power which is pivotal to bring about or prevent subjectively crucial negative outcomes. These outcomes may be actual, that is having consequences in the real world, and/or at a moral level”*  
(Salkovskis, 1996, p.110-111).

Responsibility beliefs lead to a tendency to misinterpret mental activities as indicators of personal responsibility. Individuals then generate responsibility appraisals of their intrusive thoughts (Clark, 2004). Inflated responsibility beliefs are thought to be more related to *prevention* of perceived negative consequences that might occur because of the intrusive thought, rather than responsibility for the *occurrence* of the thought (Clark, 2004). Salkovskis et al. (1999) hypothesised that the origins of dysfunctional responsibility beliefs are embedded within early life experiences. Salkovskis proposed five possible pathways for the development of inflated responsibility beliefs in individuals

predisposed to OCD. These pathways, although not mutually exclusive, are reported to be crucial in the development of exaggerated responsibility beliefs in combination with other variables such as life events, prolonged stress, and depressed mood. These pathways include: *broad responsibility since childhood; rigid and extreme codes of conduct and duty; over-protective and critical parents; an actual incident affecting the health and wellbeing of others; an incident which appears to bring about harm but is actually coincidental.*

### The Empirical Status of Salkovskis' (1985, 1989) Model

Salkovskis' (1985, 1989, 1996) theory of inflated responsibility has received considerable attention over the past decade. The empirical basis for this model is strong, with support from a range of scientific modalities (e.g. self-report, interview-based, and experimental). Research has demonstrated significant correlations between responsibility and obsessive-compulsive behaviours in both clinical (e.g. OCCWG, 2001, 2003; Bouchard, Rheaume, & Ladouceur, 1999) and nonclinical participants (Freeston, Ladouceur, Thibodeau, & Gagnon, 1992; Menzies, Harris, Cumming, & Einstein, 2000; Rheaume, Ladouceur, Freeston, & Letarte, 1995). Several aspects of this theory are well supported (e.g. perceived responsibility leads to increases in compensatory responses i.e. overt or covert behaviour designed to reduce distress associated with the obsession), with emerging support for the cognitive specificity hypothesis (e.g. inflated responsibility is specific to certain obsessive compulsive symptoms). Additional support for Salkovskis' proposition of responsibility beliefs can be found in descriptions of treatment for OCD (Van Oppen, de Haan, Van Balkom, Spinhoven, et al., 1995). Ladouceur, Leger, Rheaume and Dub (1996) evaluated the efficacy of a cognitive

treatment for OCD specifically designed to target responsibility beliefs. Four participants with predominantly checking compulsions received cognitive correction for inflated responsibility without exposure with response prevention twice weekly for a maximum of 32 sessions. The authors reported that all participants demonstrated a clinically significant decrease in interference caused by rituals, a 52-100 percent reduction in Yale-Brown Obsessive Compulsive Scale scores, and a decrease in perceived responsibility. These gains were maintained at 6 and 12-month follow-up.

As has been described, inflated responsibility beliefs play a central role in the cognitive-appraisal model. However, within this model Salkovskis has proposed that it is likely that other beliefs operate in the development of obsessional thinking. Increased questions of this nature led to the formation of the OCCWG. The purpose of this group was twofold: (a) to identify the most important belief domains in OCD and (b) to develop measures of beliefs that distinguish OCD from other psychological disorders.

### **The Obsessive Compulsive Cognitions Working Group**

The OCCWG was formed following a symposium on OCD at the World Congress of Behavioural and Cognitive Therapies in Denmark in July 1995. The OCCWG consists of a group of 46 international researchers dedicated to the study of the cognitive aspects of OCD. In June 1996, the group issued a template of beliefs and operational definitions. These beliefs include: over-importance of thoughts, importance of controlling one's thoughts, inflated responsibility, overestimation of threat, intolerance for uncertainty, and perfectionism. The first five beliefs were reported to be OCD-specific, whereas the final belief, perfectionism was thought to be relevant but not exclusive to OCD (OCCWG, 1997; Clark, 2004). Based on these beliefs, the OCCWG (1997, 2001; 2003, 2005) generated two assessment measures: Obsessive Beliefs Questionnaire (OBQ-87) and Interpretations of Intrusions Inventory (III-31). Recent research demonstrates high correlations between these dysfunctional beliefs and OCD, and further still, obsessive-compulsive symptoms (Clark, 2002). Table 1 summarizes research to date on the relationship between the obsessive compulsive symptoms and the six cognitive beliefs proposed by the OCCWG.

<b>Subgroup</b>	<b>Cognitive domain</b>	<b>Research</b>
Contamination-washing (1988) Jones & Menzies (1997)	Perfectionism	Lelliott et al. Responsibility  Tallis (1996)

Harming-checking (1997, 1998)	Over-estimation of threat	Rachman	(1997,
	Perfectionism	Frost and Sher	(1989)
	Importance of thoughts	Salkovskis	(1985)
	Importance of control	OCCWG	(2001)
	Intolerance of uncertainty	Sookman & Pinard	(2002)
(1998)	Inflated responsibility	Norman et al.	
		Shafran et al.	(1996)
Symmetry-ordering	Perfectionism	OCCWG	(2005)
	Intolerance of Uncertainty	Tolin et al.	(2003)
Hoarding (1993)	Perfectionism	Frost & Gross	
	Intolerance of uncertainty	Frost & Hartl	
(1996)	Importance of control	Steketee et al.	(2000)
	Responsibility	Frost et al.	(1995)
	Miscellaneous		
<i>Religious</i> (2004)	Magical thinking	Einstein et al.	
	Importance of control	Abramowitz et al.	(2004)
	Responsibility		
<i>Repugnant</i>	Importance of thoughts	Rachman	(1997)
	Importance of control	Thordarson et al.	(2002)
	Responsibility	OCCWG	(2001)

## Discussion

Extending the theoretical work of Salkovskis (1985) and others, the OCCWG (1997; 2005) proposed six domains of dysfunctional beliefs considered to underlie OCD symptoms. The investigations by

OCCWG have provided a template regarding the most important beliefs in OCD. However, much further research is required to validate the specificity of these cognitive beliefs to OCD. Additionally, there is also very little research investigating

whether cognitive beliefs and appraisal processes vary across the diverse range of obsessive symptomatology or subtypes. Current research also appears to be limited by the method of assessment (e.g. self-report). Recent studies have debated whether these appraisals and beliefs are accessible using paper-and-pencil self-report questionnaires given the demand characteristics, idiosyncratic interpretation (Tolin et al., 2006; OCCWG, 2003) and accuracy of self-reports. Given the complexity of the constructs and the implications for the cognitive theory a more ecological approach to this issue may be required.

### References

- Abramowitz, J. S., Deacon, B. J., Woods, C. M., & Tolin, D. F. (2004). Association between protestant religiosity and obsessive-compulsive symptoms and cognitions. *Depression and Anxiety*, 20, 70-76.
- Beck, A. T. (1976). *Cognitive Therapy and Emotional Disorders*. New York: International University Press.
- Bouchard, C., Rheume, J., & Ladouceur, R. (1999). Responsibility and perfectionism in OCD: An experimental study. *Behaviour Research and Therapy*, 37, 239-248.
- Clark, D. A., & Wells, A. (1995). A cognitive model of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 69-93). New York: Guilford Press, .
- Clark, D. A. (2002). A cognitive perspective on obsessive compulsive disorder and depression: Distinct and related features. In R. O. Frost & G. Steketee (Eds.), *Cognitive approaches to obsessions and compulsions: Theory, assessment, and treatment* (pp. 233-250). Amsterdam, Netherlands: Pergamon/Elsevier Science Inc.
- Clark, D. A. (2004). *Cognitive-behavioural therapy for OCD*. New York: Guilford Press.
- Einstein, D. A., & Menzies, R. G. (2004). The presence of magical thinking in obsessive compulsive disorder. *Behaviour Research and Therapy*, 42, 539-549.
- Ellis, A. (1962). *Reason and Emotion in Psychotherapy*. New York: Carol Publishing Group.
- Freeston, M. H., Ladouceur, R., Thibodeau, N., & Gagnon, F. (1992). Cognitive intrusions in a non-clinical population. II. Associations with depressive, anxious, and compulsive symptoms. *Behaviour Research and Therapy*, 30, 263-271.
- Frost, R. O., & Gross, R. C. (1993). The hoarding of possessions. *Behaviour Research and Therapy*, 31, 367-381.
- Frost, R. O., & Hartl, T. L. (1996). A cognitive-behavioural model of compulsive hoarding. *Behaviour Research and Therapy*, 34, 341-350.
- Frost, R. O., & Sher, K. J. (1989). Checking behavior in a threatening situation. *Behaviour Research and Therapy*, 27, 385-389.
- Frost, R. O., Turcotte, T., Heimberg, R. G., Mattia, J. I., Holt, C. S., & Hope, D. A. (1995). Reactions to mistakes among subjects high and low in perfectionistic concern over mistakes. *Cognitive Therapy and Research*, 19, 195-205.
- Jones, M. K., & Menzies, R. G. (1997). Danger Ideation Reduction Therapy (DIRT): preliminary findings with three obsessive-compulsive washers. *Behaviour Research and Therapy*, 35, 955-960.
- Ladouceur, R., Leger, E., Rheume, J., & Dube, D. (1996). Correction of inflated responsibility in the treatment of obsessive-compulsive disorder. *Behaviour Research and Therapy*, 34, 767-774.
- Lelliott, P. T., Noshirvani, H. F., Basoglu, M., Marks, I. M., et al. (1988). Obsessive-compulsive beliefs and treatment outcome. *Psychological Medicine*, 18, 697-702.
- Menzies, R. G., Harris, L. M., Cumming, S. R., & Einstein, D. A. (2000). The relationship between inflated personal responsibility and exaggerated danger expectancies in obsessive-compulsive concerns. *Behaviour Research and Therapy*, 38, 1029-1037.
- Norman, R. M. G., Davies, F., Nicholson, L. C., & Malla, A. K. (1998). The relationship of perfectionism with symptoms in a psychiatric outpatient population. *Journal of Social and Clinical Psychology*, 17, 50-68.
- Obsessive Compulsive Cognitions Working Group (OCCWG; 1997). Cognitive assessment of obsessive-compulsive disorder. *Behaviour Research and Therapy*, 35(7), 667-681.
- Obsessive Compulsive Cognitions Working Group (OCCWG; 2001). Development and initial validation of the Obsessive Beliefs Questionnaire and the Interpretation of Intrusions Inventory. *Behaviour Research and Therapy*, 39, 987-1006.
- Obsessive Compulsive Cognitions Working Group (OCCWG; 2003). Psychometric validation of the Obsessive Beliefs Questionnaire and the Interpretation of Intrusions Inventory: Part I. *Behaviour Research and Therapy*, 41, 863-878.
- Obsessive Compulsive Cognitions Working Group (OCCWG; 2005). Psychometric validation of the Obsessive Belief Questionnaire and Interpretation of Intrusions Inventory--Part 2: Factor analyses and testing of a brief

McHugh O'Leary, E.M. (2007). Cognitive appraisal model of obsessive compulsive disorder (OCD): Recent advances. *New Zealand Clinical Psychologist*, 17(2), 2-8.

- version. *Behaviour Research and Therapy*, 43, 1527-1542.
- Rachman, S. (1993). Obsessions, responsibility and guilt. *Behaviour Research and Therapy*, 31, 149-154.
- Rachman, S. (1997). A cognitive theory of obsessions. *Behaviour Research and Therapy*, 35, 793-802.
- Rachman, S. (1998). A cognitive theory of obsessions: Elaborations. *Behaviour Research and Therapy*, 36, 385-401.
- Rachman, S., De Silva, P., & Roper, G. (1976). The spontaneous decay of compulsive urges. *Behaviour Research and Therapy*, 14, 445-453.
- Rheaume, J., Ladouceur, R., Freeston, M. H., & Letarte, H. (1995). Inflated responsibility in obsessive compulsive disorder: Validation of an operational definition. *Behaviour Research and Therapy*, 33, 159-169.
- Salkovskis, P. M. (1985). Obsessional-compulsive problems: A cognitive-behavioural analysis. *Behaviour Research and Therapy*, 23, 571-583.
- Salkovskis, P. M. (1989). Cognitive-behavioural factors and the persistence of intrusive thoughts in obsessional problems. *Behaviour Research and Therapy*, 27, 677-682.
- Salkovskis, P. M. (1996). *Frontiers of cognitive therapy*. New York: Guilford Press.
- Salkovskis, P. M., Wroe, A. L., Gledhill, A., Morrison, N., Forrester, E., Richards, C., et al. (2000). Responsibility attitudes and interpretations are characteristic of obsessive compulsive disorder. *Behaviour Research and Therapy*, 38, 347-372.
- Shafran, R., Thordarson, D. S., & Rachman, S. (1996). Thought-action fusion in obsessive compulsive disorder. *Journal of Anxiety Disorders*, 10, 379-391.
- Sookman, D., & Pinard, G. (2002). Overestimation of threat and intolerance of uncertainty in obsessive compulsive disorder. In R. O. Frost & G. Steketee (Eds.), *Cognitive approaches to obsessions and compulsions: Theory, assessment, and treatment* (pp. 63-89). Amsterdam, Netherlands: Pergamon/Elsevier Science Inc.
- Steketee, G., Frost, R. O., Wincze, J., Greene, K. A. I., & Douglass, H. (2000). Group and individual treatment of compulsive hoarding: A pilot study. *Behavioural and Cognitive Psychotherapy*, 28, 259-268.
- Tallis, F. (1996). Compulsive washing in the absence of phobic and illness anxiety. *Behaviour Research and Therapy*, 34, 361-362.
- Thordarson, D. S., & Shafran, R. (2002). Importance of thoughts. In R. O. Frost & G. Steketee (Eds.), *Cognitive approaches to obsessions and compulsions: Theory, assessment, and treatment* (pp. 15-28). Amsterdam, Netherlands: Pergamon/Elsevier Science Inc.
- Tolin, D. F., Worhunsky, P., & Maltby, N. (2006). Are 'obsessive' beliefs specific to OCD?: A comparison across anxiety disorders. *Behaviour Research and Therapy*, 44, 469-480.
- Tolin, D. F., Woods, C. M., & Abramowitz, J. S. (2003). Relationship between obsessive Beliefs and obsessive-compulsive symptoms. *Cognitive Therapy and Research*, 27, 657-669.
- Van Oppen, P., de Haan, E., Van Balkom, A. J. L. M., Spinhoven, P., et al. (1995). Cognitive therapy and exposure in vivo in the treatment of obsessive compulsive disorder. *Behaviour Research and Therapy*, 33, 379-390.