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**The multi-dimensionality of obsessive beliefs and their
association with obsessive-compulsive symptoms**

by

Matthew Faull

A thesis submitted in partial fulfilment of the requirements for the degree of
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Declaration

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this work will be shared with the above. The thesis has not been submitted for a degree to any other University.

Submission of Papers

The literature review is being prepared for submission to Clinical Psychology and Psychotherapy (Faull, Joseph & Meaden), the main paper is being prepared for submission to Behaviour, Research and Therapy (Faull, Joseph, Meaden & Lawrence), and the brief paper is being prepared for submission to Clinical Psychology and Psychotherapy (Faull, Joseph, Lawrence & Meaden). The reference style in the main text of chapters varies according to instructions of the respective journals (see Appendix A).

Summary

The aim of this study was to examine the dimensionality of obsessive beliefs and their relationship to the varied symptoms of obsessive-compulsive disorder (OCD). Research and expert consensus has suggested that six belief domains are most relevant to OCD and suggest that these domains are closely related. In the first study 136 student participants completed measures of belief domains, OCD symptoms, and anxiety and depression. Correlation and principal component analysis suggested that belief domains were not in fact distinct. A partial correlation analysis demonstrated that summed scores of all the obsessive belief domains were significantly related to all measured OCD symptom subtypes, with the effects of anxiety and depression partialled out. Obsessive belief was most related to obsession symptoms and least to washing and neutralising symptoms. Potential clinical implications are suggested. Recently another belief construct concerning the ego-dystonic nature of intrusive thoughts has been implicated in the development and maintenance of OCD. The second study therefore attempted to determine the psychometric properties of the first available measure of this construct. 116 student participants completed this measure. Principal components analysis was used to replicate findings of an initial validation study with a student sample conducted by the authors of the scale. The analysis confirmed that ego-dystonic beliefs had four dimensions that could be characterised as Implication of Thoughts for Personality, Inconsistency of Thoughts with Morality, Dislike of Thoughts and Irrationality of Thoughts. Clinical and theoretical issues arising from both studies are discussed.

THE MULTIDIMENSIONALITY OF OBSESSIVE BELIEFS AND THEIR ASSOCIATION WITH OBSESSIVE-COMPULSIVE SYMPTOMS.

Summary: The assumption that beliefs about obsessions are critical in the development and maintenance of obsessive-compulsive disorder (OCD) is inherent in cognitive behavioural models of the disorder. An international group of OCD experts has therefore identified six beliefs as being the most relevant to OCD. Evidence suggesting the association of each of these beliefs and OCD symptoms is reviewed, focusing on those studies that compare the relative importance of belief domains or suggest close relationships between them. Evidence from recent studies suggests there is a higher degree of relationship between domains than supposed. This has contributed to difficulties both in comparing the relative importance of domains and their differential association with OCD symptom subtypes. Overall evidence to date suggests that the six belief domains are all associated with varied OCD symptoms. In principle all belief domains may therefore warrant therapeutic attention. Further research assessing the relationship of individual belief domains with OCD symptoms is indicated with a greater focus on investigating the relationships between beliefs.

Introduction

Intrusive thoughts have been found to be present in the majority of people and to have similar content to clinical obsessions (Rachman & De Silva, 1978; Salkovskis and Harrison, 1984). Following these observations, cognitive models of obsessive-compulsive disorder (OCD) propose that it is the negative appraisal of intrusive thoughts that is crucial in development and maintenance of the disorder, not the occurrence of intrusive thoughts per se (Salkovskis, 1985; 1989; Clark & Purdon, 1993; Rachman, 1997; 1998; Wells 1997; 2000). Such appraisals it is thought lead to a number of related consequences, which ultimately cause obsessions. These include adverse mood, attempts to suppress thoughts, avoidance and rituals which in turn are maintained by anxiety reduction, prevention of disconfirmation of dysfunctional beliefs, and increased frequency and salience of intrusive thoughts (See Rachman, 1997, Salkovskis, 1999). The result is a worsening spiral of intrusive thoughts and control attempts that are the typical features of OCD. According to cognitive theory appraisals are hypothesised to be derived partly from beliefs or assumptions (Beck *et al.*, 1985). There has been increasing interest therefore in the nature of beliefs that may influence the way in which intrusive thoughts are appraised.

Speculation on the nature of the beliefs that characterise people with OCD has come from differing theoretical backgrounds (e.g. Beech & Liddell, 1974; Carr, 1974; Clark & Purdon, 1993; Foa & Kozak, 1986; Guidanno & Liotti, 1983; Mallinger, 1984; McFall & Wollersheim, 1979; Rachman, 1993; Reed, 1985;

Salzman, 1968; Salkovskis, 1985; 1989; Van Oppen & Arntz, 1994; Wegner, *et al.*, 1987; Wells, 1997). From a cognitive-behavioural perspective delineation of OCD related beliefs is thought to be clinically important for a number of reasons. Almost 25 percent of patients refuse traditional exposure and response prevention therapy (ERP) (Stanley & Turner, 1995) so belief modification therefore can help patients to attempt it (Freeston *et al.*, 1996), or serve as a viable alternative treatment (Ladoceur *et al.*, 1996; Jones & Menzies, 1998b). Furthermore some authors suggest that direct modification of critical beliefs may actually result in more effective treatment than ERP and /or lower relapse rates (Rachman, 1997; 1998; Purdon & Clark, 1999).

Empirical evidence however linking OCD relevant beliefs to symptoms has not led to consistent findings. Clark (2000) states that: 'A number of cognitive constructs have been proposed as the core process in OCD. It is still not clear which of these beliefs and appraisals are more or less central to the disorder and so should be the target of intervention.' Problems evident in this research include a lack of consensus as to the type of beliefs that are most likely to be important and a proliferation of overlapping measures that create difficulty in comparing findings across studies. Additionally most research has been conducted on non-clinical samples. An international group of over 25 OCD expert researchers have been meeting therefore to advance the study of cognition in OCD [Obsessive Compulsive Cognitions Working Group (OCCWG, 1997; 2001)]. Initially they identified 16 instruments that were judged to assess 19 different domains of beliefs thought to contribute to the development and maintenance of OCD. Using

expert consensus ratings the group agreed that six major belief domains were likely to be important: inflated responsibility, overimportance of thoughts, overestimation of threat, importance of controlling thoughts, intolerance of uncertainty and perfectionism (see Appendix B for definitions). Subsequently measures of each domain were constructed by selecting items from existing instruments. These were circulated to all members who proposed changes, and scales were modified accordingly, in a repeated process of expert review. Scales items were finally discarded for their lack of relationship to OCD symptom measures and reverse-scored items were also deleted partly on this basis. This resulted in the Obsessional Beliefs Questionnaire (OBQ: OCCWG, 2001) with subscales measuring the above domains.

Outline of the Review

The first part of this review will indicate the empirical evidence that has suggested the association of the above belief domains with OCD symptoms (see also OCCWG, 1997; Steketee *et al.*, 1998b). To varying degrees however evidence has accumulated for association of each of the above constructs with OCD confirming that several belief domains are implicated. In addition recent studies have observed a high degree of interrelationship between these constructs (Steketee, *et al.*, 1998a; OCCWG, 2001). The second section of the review will, therefore, focus more attention on studies that have tested the relative importance of constructs simultaneously and/or considered the relationship between them. The third section of the review will focus in depth on studies that have examined a

wider range of beliefs and symptoms, which include an initial validation study of the Obsessional Beliefs Questionnaire. Where possible analysis of differing associations between beliefs and subtypes of OCD symptoms will be reported.

Belief domains and OCD symptoms

Inflated Responsibility

The most studied belief domain is that of inflated responsibility. Measures of inflated responsibility have been significantly correlated with OCD symptoms in many non-clinical samples (Freeston *et al.*, 1992; Freeston *et al.*, 1993; Rhéaume, *et al.*, 1994; Rhéaume *et al.*, 1995a; Wilson & Chambless, 1999; Rhéaume, *et al.*, 2000; Mancini *et al.*, 2001). In a regression analysis, Salkovskis *et al.* (2000) found responsibility scales accounted for a third of the variance in OCD symptom scores, after controlling for anxiety and depression in a mixed sample. Obsessional patients have also been found to have elevated levels of perceived responsibility compared to non-clinical controls samples (Ladoceur, *et al.*, 1999; Foa *et al.*, 2001), and anxious controls (Steketee, *et al.*, 1998a; Salkovskis *et al.*, 2000; OCCWG, 2001). In addition, Ladoceur *et al.* (1999) found no significant difference between patient groups with washing, checking and mental ritualising symptoms on responsibility scores. Only experimental studies however can provide evidence that beliefs are a cause rather than a consequence of symptoms. Researchers have successfully manipulated responsibility levels and demonstrated associated changes in OCD symptom related variables in clinical checkers

(Lopatka & Rachman, 1995), in cleaners and checkers (Shafran, 1997), and in non-clinical samples (Ladoceur, *et al.*, 1995; Ladoceur *et al.*, 1997). It has been noted however that both perceived responsibility and estimated probability of threat were similarly affected by the responsibility manipulation in these studies (Ladoceur *et al.*, 1995; Shafran, 1997). Therefore it is not clear which of these two variables produced the results or whether both were necessary (Ladoceur *et al.*, 1995).

Overestimation of Harm

The importance of overestimation of danger as well as inflated responsibility beliefs in OCD has been emphasised by Van Oppen & Arntz (1994), which was confirmed inadvertently by studies manipulating perceived responsibility (noted above). In addition obsessive-compulsive patients have shown higher levels of risk aversion than non-clinical controls (Steketee & Frost, 1994), and overestimation of threat scores were elevated significantly in a diagnosed OCD sample compared to non-clinical, and non-OCD anxious controls (OCCWG, 2001). However overestimation of threat is a significant characteristic of other anxiety disorders (Butler & Matthews, 1983). Additional evidence comes from studies of compulsive washers. Danger expectancies ratings have been significantly associated with compulsive washing symptoms in a clinical sample (Jones & Menzies, 1997a), and experimentally manipulating danger expectancies has led to changes in OCD washing symptoms (Jones & Menzies, 1998a).

Perfectionism

Perfectionism was considered a major OCD belief domain by the OCCWG (1997) but it was not thought 'necessarily exclusive to people with OCD.' In non-clinical samples dimensions of perfectionism have been linked with hoarding (Frost & Gross, 1993), checking (Gerschuny & Sher, 1995), checking and cleaning (Wade *et al.*, 1998) and other obsessive compulsive symptoms (Frost *et al.*, 1990; Rhéaume *et al.*, 1995a; Bhar & Kyrios, 1999; Frost & Steketee, 1997; Rhéaume *et al.*, 2000). Only one study has reported correlations of perfectionism beliefs and OCD symptoms in OCD patients (Ferrari, 1995). Also levels of perfectionism have been found to be higher in clinical groups compared to non-clinical controls (Antony *et al.*, 1998; Ladoceur *et al.*, 1999; Frost & Steketee, 1997; OCCWG, 2001). However OCD patients have been shown not to differ from other anxiety disorder patients on total perfectionism scores (Frost & Steketee, 1997; Antony *et al.*, 1998; OCCWG, 2001). These results confirm the notion that perfectionism beliefs are associated with OCD symptoms, but they are not uniquely associated with OCD compared to other anxiety disorders.

Overimportance of Thoughts

The overimportance of thoughts belief domain identified by the OCCWG (1997) largely correspond to Thought-Action Fusion (TAF) beliefs first identified by Rachman (1993). TAF beliefs are thought to have two components. Probability TAF refers to the belief that a thought about an event can make it more probable.

Morality TAF refers to the belief that thoughts about unacceptable deeds are morally equivalent to committing them (Shafran *et al.*, 1996). To date most research relevant to the overimportance of thoughts belief domain has been conducted with a measure of TAF (Shafran *et al.*, 1996). TAF scores have been demonstrated to correlate significantly with measures of OCD symptoms in non-clinical samples (Rachman *et al.*, 1995; Shafran *et al.*, 1996; Emmelkamp & Aardema, 1999; Muris *et al.*, 2001; Rassin *et al.*, 2001a; Coles *et al.*, 2001). Experimentally increasing levels of TAF in a non-clinical group has also been associated with increases in the frequency of intrusive thoughts (Rassin *et al.*, 1999). Using a sample of OCD patients Shafran *et al.* (1996) found only probability TAF and checking were significantly associated. In another OCD patient sample mostly non-significant relationships between TAF and OCD symptoms were found (Rassin *et al.*, 2001b). Furthermore OCD patients did not have significantly higher TAF scores than patients suffering from other anxiety disorders (Rassin *et al.*, 2001a), and TAF scores have been linked more strongly to general psychopathology measures than OCD symptom measures in a clinical sample (Rassin *et al.*, 2001b). Evidence to date therefore suggests that the demonstrated links between TAF beliefs and OCD symptoms in non-clinical samples are weaker in clinical samples, and that TAF beliefs are not specifically linked to OCD symptoms. The one study that has used a specific overimportance of thoughts scale found that scores were higher in OCD patients compared to normal and non-OCD anxious controls, and were significantly correlated with OCD symptoms in a mixed sample (OCCWG, 2001).

Intolerance of Uncertainty & Importance of Controlling Thoughts

Perhaps the least researched belief domains identified by the OCCWG (1997) are the need to control thoughts and intolerance of uncertainty. In non-clinical groups, beliefs about thought control have been associated with frequency of intrusive thoughts (Purdon & Clark, 1994a, 1994b), and obsessional thoughts and washing compulsions (Wells & Papageorgiou, 1998). Intolerance of uncertainty beliefs have been found to be related to general anxiety disorder symptoms to a greater extent than OCD symptoms in a non-clinical sample (Dugas *et al.*, 2001). A scale measuring intolerance of uncertainty however was found to be the only one to contribute to variance in OCD scores, beyond mood and worry, in a regression analysis including other belief scales and clinical participants (Steketee *et al.*, 1998a) (see below for discussion). Importance of controlling thoughts and intolerance of uncertainty beliefs have also been found to be significantly elevated in OCD samples compared to non-clinical and non-OCD anxious controls (Steketee *et al.*, 1998a; OCCWG, 2001), and to be significantly correlated with symptoms in a mixed sample (OCCWG, 2001). Further research examining the relationship of both these domains to OCD symptoms is needed in clinical samples. As heightened 'cognitive self consciousness' is argued to be a characteristic of obsessional patients (Wells, 1997), beliefs about the importance of thought control may be especially salient in clinical samples.

The relative importance of belief domains and relationships between them
(initial studies)

Inflated responsibility and Overestimation of Harm

After observing the important role that perception of danger played in their study Ladoceur *et al.* (1995) note that danger expectancy is integral to current definitions of inflated responsibility [i.e. 'beliefs of possessing pivotal power to provoke or prevent crucial negative consequences...' (see Salkovskis, *et al.*, 1996)]. They ask therefore 'Do people feel responsible after having perceived threat or do they perceive threat because they already feel responsible?' Based on the direction of manipulation in her study, Shafran (1997) argues that perceived responsibility leads to an estimation of risk. However manipulations of responsibility in clinical samples have been observed to affect both hypothesised components of perceived danger (i.e. perceived likelihood and perceived consequences of an event) (Lopatka & Rachman 1995; Shafran, 1997). It seems likely that manipulating estimates of risk would also lead to changes in perceived responsibility as is suggested by Ladoceur *et al.*, (1995). Rhéaume *et al.* (1995b) propose that estimation of probability and severity of harm is a necessary but insufficient condition (without perceived responsibility) for the development of OCD. Conversely Menzies *et al.* (2000) suggest that excessive danger expectancies are the 'driving force' behind OCD behaviours, and that responsibility is one of many variables that influence danger expectancies by affecting perceived severity of outcomes.

Fortunately, one study has attempted to clarify the respective roles of personal influence (responsibility) and negative consequences (danger) by controlling for their effects, in a non-clinical sample (Ladoceur *et al.*, 1997). Influence and negative consequences components of perceived responsibility were both manipulated experimentally creating four conditions (combined, influence, negative consequences and control), and the effects on checking behaviour (hesitations, checking and modification) during a classification task were recorded. Hesitations were provoked by increasing either component of perceived responsibility i.e. influence or negative consequences, while negative consequences alone (but not influence alone) were sufficient to produce checking. For modifications neither component alone was sufficient to produce an effect. Overall this suggests that there is some evidence that perception of danger alone can lead to obsessive-compulsive behaviour, but that both components together produce stronger effects. In conclusion it is evident that danger and inflated responsibility beliefs are closely linked, if not embedded in one another, and play a role in the development of OCD. Clearly there is a need for further clarification of their respective roles and relationship.

Perfectionism, Inflated Responsibility and Danger Beliefs

With growing evidence that perfectionism, responsibility, and danger related beliefs were associated with OCD symptoms attempts were made to empirically test their relative importance. In a regression analysis with student participants,

responsibility accounted for more variance than perfectionism in OCD symptom scores (Rhéaume *et al.*, 1995a). Perfectionism scores were still significantly associated with symptoms when the influence of responsibility was partialled out however, and the authors proposed that the role of perfectionism had been previously underestimated. To study the interaction between inflated responsibility and perfectionism, Bouchard *et al.* (1999), divided student participants into highly perfectionist (HP) and moderately (MP) perfectionist groups, and responsibility was manipulated in both conditions. Checking behaviours increased in both high responsibility conditions. Although the HP group did report higher levels of responsibility than the MP group, checking behaviours were not significantly higher in the HP group. As a result it was proposed that perfectionism may predispose individuals to feel responsible and could be conceived 'as playing a catalytic role in the perception of responsibility.' In a non-clinical sample, Rhéaume *et al.* (2000), attempted to determine the relative association of responsibility, perfectionism and perceived danger to obsessive-compulsive symptoms. Correlations between perfectionism and the responsibility scales were in the moderate range and it was assumed different constructs were being measured, but a high correlation between perceived responsibility and danger indicated a close relationship. All three variables were significantly correlated with OCD symptom scores (including most symptom subtypes). Results of a regression analysis suggested that responsibility and perfectionism had a similar and significant degree of association with symptoms, which was far greater than that of perceived danger. However perceived danger

was only assessed with two items. The authors argue that compared to responsibility, perfectionism 'may also play an equally important role in OCD.'

Examination of the roles of danger expectancies, responsibility, and perfectionism, in a sample of obsessive-compulsive handwashers found contrasting results to the above studies (Jones & Menzies, 1997a). In a partial correlation analysis, when responsibility ratings were held constant, severity of illness ratings remained significantly related to four OCD variables. Neither perfectionism nor responsibility ratings however were found to be significantly related to any of the four OCD dependent variable measures when danger expectancy ratings were held constant. Jones and Menzies (1997a) concluded, in contrast to the above studies that emphasise responsibility and perfectionism, that outcome or danger expectancies are the most likely mediators of washing related behaviour in OCD. A criticism of all of the above studies is that their design did not control for the co-occurring association of anxiety and depression symptoms with OCD symptoms. Overall it is difficult to draw conclusions from them other than they provide further evidence that perfectionism, responsibility and danger beliefs are implicated in OCD. Further research is indicated using reliable and valid measures of the three variables, especially in clinical samples with varied compulsions.

Inflated Responsibility and Thought Action Fusion beliefs

Inflated responsibility beliefs have been thought of as being theoretically connected to thought-action fusion beliefs (Rachman & Shafran, 1999). It has been suggested that it is TAF beliefs that make OCD patients prone to experience a sense of inflated responsibility (Shafran *et al.*, 1996; Rachman, 1997; Wells 1997). This was indicated by a psychometric analysis of a responsibility scale that demonstrated that only one of the derived factors (TAF) was significantly related to OCD symptoms (Rachman *et al.*, 1995). Salkovskis *et al.* (2000) state that beliefs about overimportance of thoughts (which as noted are similar to TAF beliefs) are incorporated by their definitions of beliefs concerning inflated responsibility. Not surprisingly, significant correlations have been found between the Responsibility Attitude Scale (RAS: Salkovskis *et al.*, 2000) and TAF-scale (Shafran *et al.*, 1996) and were shown respectively to predict similar amounts of variance in OCD symptoms, after controlling for the influence of thought suppression (Smári & Hölmsteinsson, 2001). Salkovskis & Freeston (2001) state that more empirical work is necessary to know whether 'it is more heuristic to consider thought-action fusion as an integral part of responsibility or as a separate but closely linked entity.' Further confusion arises from the proposed relevance of a tripartite view of fusion of beliefs (i.e. thought action fusion, thought-event fusion, thought-object fusion) in understanding OCD (Wells, 2000), and again more empirical work is suggested (Wells, personal communication, 2000).

Studies relating multiple belief domains to OCD symptoms

Steketee, Frost & Cohen (1998)

The development of an instrument to measure belief domains in OCD (OCCWG, 1997; 2001), appears to have inspired studies that relate a wider range of beliefs to OCD symptoms. For example, Steketee *et al.* (1998a), attempted to assess the relative importance of four belief domains identified by the OCCWG (responsibility for harm, need to control thoughts, overestimation of threat and intolerance of uncertainty) to OCD symptoms. Beliefs were measured by a questionnaire created for the study, using items from existing instruments, and new ones generated by the first two authors (who are co-chairs of the OCCWG). It is not clear however how similar these scales are to the finalised belief domain subscales reported by the OCCWG (2001). Significantly higher scores were obtained by OCD patients on all belief scales compared to anxious and normal controls, and all beliefs were significantly correlated with two OCD symptom measures (in a combined sample). In their hierarchical regression analysis, the tolerance of uncertainty scale was the only belief measure that contributed significantly to variance in OCD symptom scores, beyond mood and worry (in the mixed OCD and control group sample). Although this study appears to indicate the relevance of the above belief domains, particularly intolerance of uncertainty, to symptoms of OCD, these results have to be treated with caution. Salkovskis *et al.* (2000) highlighted several methodological limitations. Items on the belief measure devised for this study were selected specifically because they correlated

with the measure of obsessional symptoms used. There was criterion contamination in many of the items in all scales (e.g. threat estimation items referred to obsessional symptoms), and clinical and non-clinical groups were determined by using cut-off scores of obsessional measures. Additionally it should be emphasised that high correlations (ranging between .74 and .82) among belief domains raised the interesting question of 'overlap between constructs' indicating that domains may be 'difficult to differentiate.' Their utility however as independent variables for comparison in regression analyses therefore also has to be questioned.

Emmelkamp & Aardema (1999)

It has been suggested that research is necessary to isolate the specific contribution of proposed beliefs to specific symptoms (Emmelkamp & Aardema, 1999; Wells, 2000). Emmelkamp & Aardema's (1999) study is the only one to date that has specifically attempted to assess the relationship of a wide range of OCD beliefs to different OCD symptoms. Obsessive compulsive belief domain scales were derived from an initial item pool created from other instruments by the OCCWG (1997). Further items were added and scales were then modified on comprehensibility and psychometric grounds. Some of the resulting scales bear a superficial resemblance to belief domains identified by the OCCWG (1997) (e.g. risk probability, responsibility, thought action-fusion, overimportance given to thoughts, magical thinking, consequences of having thoughts, control, inverse inference). The authors make clear however that their measure is unrelated to the

Obsessional Beliefs Questionnaire (OBQ: OCCWG, 2001). For instance magical thinking and thought action fusion beliefs would be contained within the overimportance of thoughts domain identified by the OCCWG. Although not reported in full, it was indicated that correlations between these domains were all less than .62. In addition the significance level of correlations between symptom subscales and belief domains were not reported. The symptom measure used was the Padua-Revised (PI-R: Van Oppen *et al.*, 1995) which has been criticised for not measuring certain categories of obsessions and compulsions such as neutralising and hoarding (Foa *et al.*, 1998). It has also been shown that its obsessional subscales appear to measure worry (Freeston *et al.*, 1994). Most of the results from a regression analysis using a large non-clinical sample were unaffected after controlling for depression and the authors argue 'that specific domains of obsessional beliefs account for specific obsessive compulsive behaviour in a meaningful way'. For example thought-action fusion accounted for significant variance in washing and checking symptoms but not in impulses, precision and rumination symptoms. Risk probability accounted for significant variance in washing, checking and precision but not impulses and rumination symptoms. Inflated responsibility explained only a small part of the variance in precision symptoms. The consequences of having thoughts domain used in the study (example item: 'I believe that if I lost control over my thoughts, I might eventually develop a psychological problem') appears to be similar to the importance of controlling thoughts domain identified by the OCCWG (1997). It accounted for significant variance in rumination and impulses, but not washing, checking, and precision symptoms. Additionally control and overimportance of

thought belief domains did not account for significant variance in OCD symptom scores. Due to the unclear relationship between domains used and ones identified by the OCCWG however it is not possible to draw firm conclusions from this study. In addition some belief scales have modest reliabilities (e.g. .63), and low item content (e.g. four).

OCCWG (2001)

An initial validation study of the Obsessional Beliefs Questionnaire (OBQ: OCCWG, 2001), related all subscales (reflecting the domains considered by this review) to another revised version of the Padua Inventory (PI-WSUR: Burns *et al.*, 1996) in a large mixed sample. The symptom measure is subject to similar criticisms as those noted above for the PI-R. The study also showed that reliably diagnosed OCD patients scored higher than patients with other anxiety disorders, community and student controls on all subscales except perfectionism. The anxiety disorder group included only 12 patients however thus weakening the possible conclusion that these belief domains are especially pertinent to OCD patients. One of the most notable results was that the belief scales (i.e. overestimation of threat, control of thoughts, importance of thoughts, tolerance of uncertainty and perfectionism) were all highly correlated (ranging between 0.60 and 0.81, $p<0.005$). In a mixed sample, each belief scale was significantly related to the total OCD symptoms score ($p<0.001$). Overestimation of threat had the strongest relationship to symptoms followed by, responsibility, tolerance of uncertainty, perfectionism, control of thoughts and importance of thoughts. All

results remained significant when they were controlled for anxiety and depression.

With few exceptions each symptom subtype was significantly associated with each belief domain, when anxiety and depression scores were partialled out. These results suggest that all belief domains are broadly associated with the majority of OCD symptoms. They also suggest overestimation of threat beliefs have the strongest overall relationship to symptoms. However the observed degree of relationship between belief domains and the selection of belief scale items according to their relationship with the OCD measure used (using the same sample for item selection as validation) does compromise these conclusions. It also makes further speculation on the relationship of individual belief domains with specific symptom subtypes seem premature. The authors of this study suggest that future research examining correlations with particular symptom profiles should use different forms of assessment. Perhaps most importantly however they state that 'question of overlap between putatively separate constructs' will have to be 'addressed extensively in subsequent validation studies.' Whether the high observed correlations between belief domains result from the particular properties of these belief domain sub-scales, or the domains not in fact being distinct, remains open to empirical investigation. Clearly there is a need for further research using the OBQ.

Conclusion

There has been growing interest in beliefs held by people with OCD. Expert consensus rating has suggested that six belief domains are likely to be most

relevant to OCD (inflated responsibility, intolerance of uncertainty, overestimation of threat, importance of controlling thoughts, overimportance of thoughts and perfectionism). Empirical evidence has now accumulated to support the relationship of each of these domains to OCD symptoms. However there is a relative lack of research using intolerance of uncertainty and importance of controlling thoughts belief domains. There is also evidence that overestimation of threat, overimportance of thoughts, intolerance of uncertainty and perfectionism belief domains may be equally relevant in other anxiety disorders. In addition only threat estimation, inflated responsibility and thought-action fusion beliefs have been manipulated experimentally providing support for the view that these beliefs are causes rather than consequences of symptoms.

With the recognition that several belief domains are associated with OCD symptoms, research has focused on relating more than one belief simultaneously to OCD symptoms, to compare their relative importance. This has provided further support for the relationship of importance of danger related beliefs, perfectionism and thought-action fusion beliefs to OCD symptoms. Conclusions regarding their relative importance have been contradictory however. Empirical studies have also suggested close relationships between threat-estimation, thought-action fusion and inflated responsibility beliefs and there is a need for further research to clarify the relationships between them. Furthermore, recent studies have suggested a high degree of relationship exists between all six belief domains.

The few studies that have related a wide range of beliefs to global OCD symptom, or specific symptom profiles, have yielded contradictory findings. Inconsistent results, different belief and symptom measures, methodological inconsistencies and the high observed relationships between domains make it difficult to draw conclusions. It is not possible therefore to state the relative importance of belief domains to OCD symptoms globally or suggest meaningful patterns of relationships between the six belief domains and specific symptom subtypes. The validation study of a scale including all six belief domains in fact indicates that all domains are significantly associated with all symptom subtypes. The high degree of association between domains in this study does however weaken this conclusion. Therefore it is still unclear if it will be possible to confidently establish the relative importance of these particular belief domains to OCD symptoms generally, or meaningful patterns of relationships between them and specific symptom profiles. Further research is needed that relates a wide range of beliefs to a wide range of symptoms, in clinical OCD, anxious control and non-clinical samples. However research also needs to establish whether the belief domains derived by expert consensus are less distinct than once thought.

The main clinical implication of the above research is that all six belief domains should be assessed in OCD patients. It seems likely that patients with varied symptoms will hold all of these beliefs to varying degrees. Individual formulations, including the decision about what cognitions should be targeted, may therefore be assisted by use of the Obsessional Beliefs Questionnaire. Cognitive techniques used to challenge these beliefs have been described by

Freeston *et al.*, 1996. To date there is evidence that targeting inflated responsibility beliefs alone (Ladoceur *et al.*, 1996) and danger related beliefs alone (Jones & Menzies, 1998b), in OCD patients (without exposure and response prevention) is associated with a reduction in symptoms. Overall the reviewed research suggests, at least in principle, that targeting other belief domains may also result in symptom reduction. A high degree of relationship between belief domains also implies the interesting possibility that belief modification in one domain may result in reductions in other domains.

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OBSESSIVE BELIEFS AND THEIR RELATIONSHIP TO OBSESSIVE-COMPULSIVE SYMPTOMS

Summary: Relationships between obsessive-compulsive symptoms and beliefs identified as relevant to obsessive-compulsive disorder (OCD) are investigated among university students. In total 136 Participants completed measures of OCD related beliefs, OCD symptoms, and anxiety and depression. Results confirmed that belief domains were strongly associated and were not sufficiently separate to use individually in further analysis. The summed obsessive belief score was significantly correlated with all obsessional symptoms, measured with the effects of anxiety and depression partialled out. Obsessional belief appeared to be most related to obsession symptoms and least related to neutralising, washing and checking symptoms. Potential reasons for the relationships between domains are discussed and possible clinical implications are suggested.

INTRODUCTION

Cognitive models of obsessive-compulsive disorder (OCD) broadly propose that the negative appraisal of intrusive thoughts is crucial in the development and maintenance of the disorder (Salkovskis, 1985; 1989; Clark & Purdon, 1993; Rachman, 1997; 1998; Wells, 1997). Various belief domains have been implicated as influencing negative appraisals, and therefore as being associated with OCD symptoms. It is still not clear however which of these beliefs are most influential (Clark, 2000), or if belief domains have specific relationships to symptom subtypes. One of the main research problems has been the multitude of proposed beliefs and instruments to measure them. A group of international OCD experts has therefore identified, by consensus ratings, the six most relevant belief domains: inflated responsibility, overimportance of thoughts, importance of controlling thoughts, overestimation of threat, intolerance of uncertainty, and perfectionism. [Obsessive Compulsive Cognitions Working group (OCCWG, 1997)]. The group has also developed, and conducted an initial validation study, of a questionnaire to measure these belief domains (OCCWG, 2001).

Empirical support for the association of the above belief domains with OCD symptoms has accumulated in the last decade (see OCCWG, 1997; Steketee, Frost, Rheaume & Wilhelm, 1998b). Additional recent support for the following domains includes: inflated responsibility beliefs (Ladoceur, Bouvard, Rheaume & Cottraux, 1999; Wilson & Chambless, 1999; Salkovskis, Wroe, Gledhill, Morrison, Forrester, Richards, Reynolds & Thorpe, 2000; Mancini, D'Olimpio &

D'Ercole, 2001), overestimation of harm (Jones & Menzies, 1997a; Jones & Menzies, 1998a), perfectionism (Wade, Kyrios & Jackson, 1998; Ladoceur, et al., 1999; Rhéaume, Ladoceur & Freeston, 2000). Most evidence for the overimportance of thoughts domain is provided by studies using a measure of thought action fusion beliefs (a similar concept) (Rassin, Merckelbach, Muris & Spaan, 1999; Rassin, Merckelbach, Muris & Schmidt, 2001a; Muris, Meesters, Rassin, Merckelbach & Campbell, 2001; Coles, Mennin & Heimberg, 2001). There is relatively less evidence for intolerance of uncertainty (Steketee, Frost & Cohen, 1998a; Dugas, Gosselin & Ladoceur, 2001), and the importance of controlling thoughts belief domains (Wells & Papageorgiou, 1998). Recently the OCCWG (2001) found scores on measures of all the above belief domains, except perfectionism, were significantly elevated in comparison to a small group of anxiety disorder patients without OCD. There is however evidence that intolerance of uncertainty (Dugas et al., 2001), overimportance of thoughts (Rassin et al., 2001a; Rassin et al., 2001b), perfectionism (Frost & Steketee, 1997; Anthony, Purdon, Veronika & Swinson, 1998), and overestimation of harm (Butler & Matthews, 1983) are relevant in other anxiety disorders.

With the recognition however that several beliefs are associated with OCD symptoms studies have increasingly sought to establish their relative association with OCD symptoms. For example, a regression analysis in a non-clinical sample indicated that scores on responsibility and perfectionism measures were both significantly and equally associated with symptoms, but danger expectancy scores were not significantly associated with symptoms (Rhéaume et al., 2000). In

contrast ratings of perfectionism and responsibility were not significantly related to OCD measures in a sample of clinical handwashers, when the influence of danger expectancy ratings were partialled out (Jones & Menzies, 1997a). Danger expectancies in this study were however significantly related to OCD measures when responsibility and perfectionism ratings were partialled out, indicating that danger expectancies were more likely mediators of OCD phenomena than responsibility and perfectionism beliefs. It is possible that the conflicting results may be partly explained by the disparity between belief measures and samples used in these studies.

Another possibility, that complicates the comparison between belief domains, is that OCD relevant belief domains are not as distinct as is supposed. Many plausible links between them have been suggested. For example, it has been found that manipulation of responsibility beliefs caused changes in overestimation of harm beliefs (Lopatka & Rachman, 1995; Ladoceur, Rhéaume, Freeston, Aublet, Jean, Lachance, Langlois & Pokomandy-Morin, 1995; Shafran, 1997) leading to speculation that they may be inseparable (Ladoceur et al., 1995). Inflated responsibility and thought-action fusion beliefs are considered to be theoretically related (Rachman, Thordarson, Shafran & Woody, 1995; Rachman & Shafran, 1999) and have been found to be highly correlated with each other (Smári & Hölmsteinsson, 2001). Indeed, Salkovskis et al. (2000) propose that inflated responsibility, overimportance of thoughts and importance of controlling thoughts beliefs are all incorporated by their definition of inflated responsibility. It has also been suggested that an exaggerated sense of responsibility or risk may lead people

to seek greater certainty or attempt to control their thoughts (Steketee et al., 1998a). Plausible interactions have been suggested between perfectionism and responsibility beliefs (Bouchard, Rhéaume & Ladoceur, 1999) and perfectionism and intolerance of uncertainty beliefs (Guidano & Liotti, 1983). Overall these studies, and the probability of further possible connections, suggest empirical work is necessary to discover if some beliefs are integral to each other or should be considered as separate.

The development of a scale to measure belief domains in OCD (OCCWG, 1997; 2001) appears to have encouraged studies that relate a wider range of beliefs to OCD symptoms. For example, Steketee et al. (1998a) attempted to assess the relative importance of four beliefs identified by the OCCWG (responsibility for harm, need to control thoughts, overestimation of threat and intolerance of uncertainty), by a measure that was devised for the study. In a regression analysis, intolerance of uncertainty was the only belief measure that contributed to significant variance in OCD symptom scores, beyond mood and worry (in a mixed sample including people with OCD). However correlations between belief scales were high (the majority being over .80), so their utility as independent variables in the regression analysis is questionable, and indicates that belief domains were indeed closely related. The use of a combined clinical/non clinical sample may have however resulted in artificially high correlations. In addition items for belief scale measures were selected specifically because they correlated with the measure of obsessional symptoms used as the dependent measure, and

many of the belief scale items referred to obsessional symptoms (see Salkovskis et al., 2000), further weakening possible conclusions from this study.

Some researchers have proposed it is also necessary to isolate the specific contribution of beliefs to specific symptoms (Emmelkamp & Aardeman, 1999; Wells, 2000). In a regression analysis, Emmelkamp & Aardema (1999) assessed the relationship of several OCD belief domains, using measures partly derived from a preliminary item pool developed by the OCCWG (1997), to specific OCD subtypes. In a large non-clinical sample regression analysis indicated that thought-action fusion beliefs were significantly associated with washing and checking only, risk probability was found to be related to washing, checking and precision only, but responsibility explained only a small part of the variance in one subtype of OCD (precision). The 'consequences of having thoughts' scale appeared similar to the importance of controlling thoughts domain identified by the OCCWG, and was significantly associated with impulses and rumination symptoms only. Although these results are suggestive of specific relationships of belief domains to symptom profiles, the significance of correlations of symptoms and belief were not reported, and the relationship of the domains used to the domains identified by the OCCWG is unclear. In addition the inflated responsibility, risk probability and consequences of having thoughts measures showed only moderate reliabilities.

The most comprehensive study to date relating the six identified belief domains to OCD symptoms was a validation study of the Obsessional Beliefs Questionnaire

(OBQ: OCCWG, 2001), using a large sample consisting of OCD patients, anxious controls and normal controls. Correlations of each belief subscale and overall OCD symptom scores, controlled for negative affect, were all significant ($p<0.001$). Overestimation of threat beliefs were most highly related to symptoms overall, followed by responsibility, intolerance of uncertainty, perfectionism, control of thoughts and importance of thoughts in decreasing order. Furthermore, all belief scales correlated significantly with all symptom subtypes, and with few exceptions, this remained true when correlations were controlled for negative affect. The symptoms measure was a revised version of the Padua Inventory (Sanavio, 1988) which has however been criticised for not measuring certain categories of obsessions and compulsions such as neutralising and hoarding (Foa, Kozak, Salkovskis, Coles & Amir, 1998). The above result suggests a more uniform pattern of relationships than found by Emmelkamp & Aardema (1999). Perhaps the most notable result of the validation study however was that correlations between the belief domains were all highly significant ($p<0.005$), with the majority being greater than .7. However the authors note that the pooled clinical/non clinical sample had higher correlations than either single sample. In addition items were selected for the OBQ subscales partly on the basis of their high correlation with OCD measures (i.e The Padua). Both of these observations weaken the possible conclusion that all six belief domains are highly related to all OCD symptoms, and makes it seem premature to suggest specific associations of belief domains with symptom profiles. The OCCWG (2001) proposed that further research should use different forms of assessment and that the degree of overlap

between 'putatively separate' constructs would be addressed in their future validation studies.

Outline of study

There is little consensus between the studies that have comprehensively related beliefs to specific OCD symptoms. The current study therefore aims to further assess the degree of relationship between a wide range of beliefs and symptoms using belief measures developed by the OCCWG (2001), and a symptom measure that is thought to best capture the full heterogeneity of OCD symptoms (Foa, et al., 1998). Individual belief domains will be used as independent variables in a multiple regression analysis, with symptom subtypes as criterion variables. However if high correlations are observed between belief domains (as indicated by Steketee et al., 1998a; OCCWG, 2001), they will be examined for their underlying factor structure and the derived factors will then be used as independent variables. The utility of using analogue samples in OCD research has been supported (Burns, Formea, Keortge & Sternberger, 1995).

Aims

Due to the inconsistency of findings to date the current study is exploratory. Specifically it aims to answer the following questions: If correlations between belief domains are high what is the underlying factor structure? Which belief domains or derived factors explain most variance in global OCD symptom scores?

What are the relative associations between belief domains or derived factors and OCD symptom subtypes?

METHOD

Participants

The non-clinical sample contained 136 student participants (many were mature) with a mean age of 29.4 years ($SD=10.9$) and 103 (75.7%) were female.

Measures

Obsessive Beliefs Questionnaire (OBQ: OCCWG, 1997; 2001) The OBQ is an 87 item self-report measure to assess endorsement of OCD related beliefs. Its subscales are: Control of thoughts (14 items), Importance of thoughts (14 items), Responsibility (16 items), Intolerance of uncertainty (13 items), Threat estimation (14 items), and Perfectionism (16 items). Responses are made on a seven-point scale. Initial data support the internal consistency and validity of the scale using diagnosed OCD patient, community, student, and non-OCD anxious samples (OCCWG, 2001). (See appendix 2)

Obsessive Compulsive Inventory (OCI: Foa, Kozak, Salkovskis, Coles & Amir, 1998) The OCI is a 42 item self-report measure of obsessive-compulsive symptoms. Participants rate each item for both frequency and distress on 5-point Likert scales. There are seven subscales: Washing (8 items), Checking (9 items),

Doubting (3 items), Ordering (5 items), Obsessions (8 items), Hoarding (3 items), and Mental Neutralising (6 items). Internal consistency reliability ranges, and discriminant and convergent validity for distress and frequency scales, have all been found to be satisfactory. The scale has been validated with patient samples diagnosed by experts as having OCD, other anxiety disorders, as well as non-psychiatric controls (Foa et al., 1998; Simonds et al., 2000) (See Appendix 2).

The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).

The HADS is a 14 item self-report rating scale designed initially for use with people with physical illness. Seven items measure depression and seven items measure anxiety. It has been thought to be particularly useful as a tool to measure distress relatively independently of the impact of physiological or cognitive components. The scale has been found to have robust psychometric properties (Dagnan, Trower & Chadwick, 2000). Obsessive-compulsive symptoms have been linked with anxiety and depression (Salkovskis, 1985) so this scale constitutes an appropriate measure of negative affect (See Appendix 2).

Demographic Information. Items assessing age and gender were included in the questionnaire battery.

Procedure

Participants

University students were given a brief outline of the research at lectures and asked to participate voluntarily by filling in the questionnaire battery. It was made clear that the information they provided would be anonymous (completed measures were not identified by name and were returned to university departments in unmarked envelopes).

RESULTS

Missing Values

If over 5% of values were missing on a variable for a particular case, that case was not used in any analysis (through list wise deletion of cases - SPSS version 10). When less than 5% of observations were missing from a variable, the missing values were replaced with the mean variable score. There was no observed pattern to the missing data.

Age and Gender Effects

Independent t-tests were conducted on all variables grouped by gender and age (split by 50th percentile) . OCI ratings of distress and frequency for each subscale item were multiplied then summed for each subscale, to create a frequency

weighted distress OCI score, as recommended by the authors for the scale (see Amir, Freshman, Ramsey, Neary & Brigidi, 2001). T-values and degrees of freedom were adjusted for heterogeneous variances as required. No results were significant for gender analysis. However two results were significant for the age analysis. Total obsessional symptoms (frequency/distress) were significantly higher in the younger age group [$t(132)=-2.08$, $p<0.05$], as were hoarding symptoms [$t(105.4)=-2.85$, $p<0.01$].

Scale Descriptives and Group Differences

Means standard deviations were calculated for the sample (see Table 2.1). The observed values of all subscales fell within ranges to be expected from previous psychometric studies. Cronbachs alphas were calculated for Belief, OCD symptom, and anxiety and depression subscales. All scales demonstrated moderate to excellent internal consistency: OBQ (.84 to .92), OCI Distress (.61 to .85), OCI Frequency (.70 to .85), HADS Anxiety (.81) and HADS Depression (.80) (see Table 2.1).

TABLE 2.1. Scale Alphas, Means, and Standard Deviation.

<i>n</i> =133-6	Alphas	M	(SD)
HADS - A	.81	7.79	(3.70)
HADS - D	.80	4.00	(2.99)
OCI - TOT (F)	.94	27.23	(19.48)
OCI - OBS(F)	.81	.72	(.61)
OCI - WAS(F)	.85	.42	(.54)
OCI - CHE (F)	.81	.61	(.55)
OCI - NEU (F)	.70	.45	(.50)
OCI - ORD (F)	.83	.86	(.81)
OCI - HRD (F)	.79	1.06	(.91)
OCI - DBT (F)	.70	.81	(.77)
OCI - TOT (D)	.93	19.39	(17.87)
OCI - OBS(D)	.82	.70	(.69)
OCI - WAS(D)	.85	.28	(.47)
OCI - CHE (D)	.82	.38	(.47)
OCI - NEU (D)	.61	.31	(.37)
OCI - ORD (D)	.83	.55	(.65)
OCI - HRD (D)	.62	.55	(.64)
OCI - DBT (D)	.69	.62	(.72)
OBQ - TOT	.97	220.77	(76.04)
OBQ - TOL	.84	36.59	(11.77)
OBQ - THE	.89	31.52	(13.94)
OBQ - CON	.88	34.36	(13.80)
OBQ - IMP	.88	26.95	(12.04)
OBQ - RES	.89	44.62	(17.20)
OBQ - PER	.92	46.73	(18.47)

Key: HADS-A = HADS Anxiety, HADS-D = HADS Depression, OCI = Obsessive Compulsive Inventory, (D) = Distress, (F) = Frequency, OBS = Obsessions, WAS = Washing, CHE = Checking, NEU = Neutralising, ORD = Ordering, HRD= Hoarding, DBT = Doubting, TOT = Subscale total, OBQ= Obsessional Beliefs Questionnaire, TOL = Intolerance of Uncertainty, THE = Overestimation of threat, CON = Need to Control Thoughts, IMP = Overimportance of Thoughts, RES = Inflated Responsibility, PER = Perfectionism.

Association between Obsessional Belief Domains

Pearson's correlation coefficients were calculated to determine the strength of association between the belief scales of the OBQ (See Table 2.2).

Table 2.2. Correlation between OBQ subscales^a

OBQ Subscales	OBQ-TOL	OBQ-THE	OBQ-CON	OBQ-IMP	OBQ-RES	OBQ-PER
OBQ-TOL	-					
OBQ-THE	.74*	-				
OBQ-CON	.73*	.75*	-			
OBQ-IMP	.71*	.77*	.81*	-		
OBQ-RES	.77*	.69*	.66*	.64*	-	
OBQ-PER	.74*	.69*	.70*	.69*	.64*	-

Note: * (n=136) * Significant at the 0.001 level (2-tailed)

Key: OBQ= Obsessional Beliefs Questionnaire, TOL = Intolerance of Uncertainty, THE = Overestimation of threat, CON = Need to Control of thoughts, IMP = Overimportance of Thoughts, RES = Inflated Responsibility, PER = Perfectionism.

Correlations between OBQ subscales ranged between .64 and .81 with an average of .72. All were statistically significant ($p < 0.001$). This degree of correlation would make determining the importance of specific beliefs difficult because the effects of individual beliefs would be confounded. It has been recommended that researchers should think carefully about including any variables with a bivariate correlation of .70 in the same regression analysis (Tabachnik & Fidell, 1989). The use of principal component analysis to obtain a smaller set of unrelated independent variables, is suggested to be an effective method of dealing with multicollinearity problems (Stevens, 1996).

Principal Components Analysis of Belief Domains

Principal component analysis of the six OBQ belief domain subscales was conducted. The first component had an Eigenvalue of 4.59 and accounted for 80.2% of the variance. The second component had an Eigenvalue of .44. 'Kaisers Criterion' states that only components whose Eigenvalues are greater than 1 should be retained (see Figure 2.1). A one component solution is indicated, and thus no rotation was performed.

Figure 2.1. Scree Plot of Eigenvalues of the OBQ subscale correlation matrix

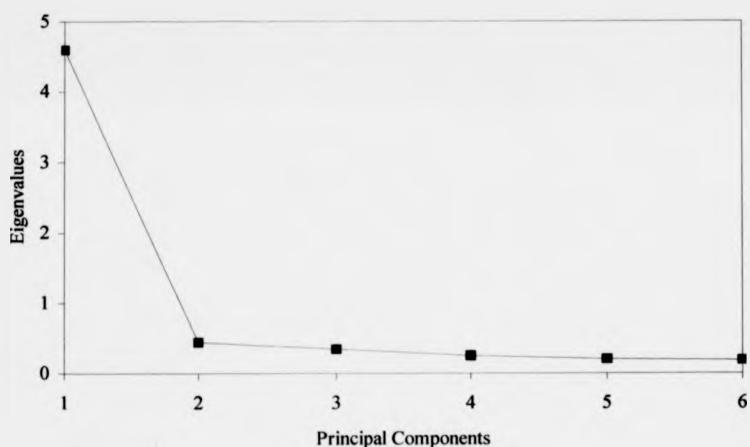


Table 2.3. Component matrix for OBQ scales

OBQ Belief Domains (n=153)	COMPONENT 1
Intolerance of Uncertainty	.90
Overestimation of Threat	.89
Need to Control Thoughts	.89
Overimportance of thoughts	.88
Inflated Responsibility	.84
Perfectionism	.85

Table 2.3. shows the component loadings for the extracted component (partial correlation coefficients between the variables and component). The higher the absolute value of the loading, the more the component accounts for the total variance of scores on the variable concerned. The high observed magnitude of all loadings therefore suggests that the component accounts for a large part of the variance of each belief domain. Thus there is no evidence from this analysis that the belief domains are distinct separable constructs (which confirms the impression given by the correlation matrix). Consequently all belief domain scores were added to form a total belief score (OBQ-TOT) to be used in further analysis instead of individual belief domains.

Correlations of Obsessional Belief with OCD Symptoms

Zero order correlations of obsessional belief (OBQ-TOT) and all obsessional symptoms (frequency weighted distress scores) were high and all statistically significant ($p < 0.001$) (See Table 2.4). Obsessional belief was most strongly related to obsession symptoms, and then in descending order, doubting, ordering, neutralising, washing, checking and hoarding. Obsessional belief was also highly correlated with anxiety and depression ($p < 0.001$). Partial correlations were therefore calculated between OCD symptoms, obsessional belief and depression and anxiety (See Table 2.4).

When the OCD symptom scores were partialled out, correlations between obsessional belief and depression and anxiety dropped but remained significant. When depression and anxiety scores were partialled out, correlations between obsessional belief and OCD symptoms also dropped but remained highly significant ($p < 0.001$). Overall OCD symptoms were more strongly related to obsessional beliefs, when anxiety and depression were partialled out, than anxiety and depression were related to obsessional belief, when obsessional symptoms were partialled out. These results therefore support the specific relationship between obsessional beliefs and OCD symptoms rather than a general relationship of obsessional belief with negative affect.

As noted above correlations of the obsessional belief score and all OCD scores, controlled for anxiety and depression, were all significant ($p < 0.001$). With the effects of anxiety and depression partialled out, obsessional belief was most

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As noted above correlations of the obsessional belief score and all OCD scores, controlled for anxiety and depression, were all significant ($p < 0.001$). With the effects of anxiety and depression partialled out, obsessional belief was most

strongly related to obsession symptoms, and then in descending doubting, washing, ordering and equally (neutralising, hoarding and checking) symptoms (see Table 2.4). The overall correlation between obsessional belief and the OCD symptom total score was .57, indicating a high degree of relationship of obsessional belief to OCD symptoms, independent of the effect of anxiety and depression. As there was no evidence in this study that individual belief domains were distinct constructs, correlations of individual belief domains and OCD symptom scores are not reported in the table. They were all significant ($p<0.05$) as might be expected.

Table 2.4. Zero Order and Partial Correlations between Obsessive Belief, OCD symptoms and Mood.

Obsessive Compulsive Inventory										
	HA-A	HA-D	OBS	WAS	CHE	NEU	ORD	HRD	DBT	OCI-TOT
Zero order correlations										
OBQ (n=133)										
OBQ -TOT	.49***	.47***	.62***	.45***	.44***	.46***	.49***	.42***	.59***	.70***
Partial correlations										
OBQ (n=130)										
OBQ -TOT	.24**	.19*	.49***	.37***	.31***	.31***	.34***	.31***	.45***	.57***
Partial out OCI										
Partial out HADS										

Key: HADS-A = HADS Anxiety, HADS-D = HADS Depression, OBS = Obsessions, WAS = Washing, CHE = Checking, NEU = Neutralising, ORD = Ordering, HRD= Hoarding, DBT = Doubting, OBQ = Obsessive Beliefs Questionnaire, OCI= Obsessive Compulsive Inventory. TOT = Subscales total ,

* p<0.05., **P<0.01, ***P<0.001

DISCUSSION

Relationships between individual belief domains

A high degree of correlation was observed between all belief domains and this result will form the main part of the discussion. The result replicates previous findings (Steketee et al., 1998a; OCCWG, 2001) and is consistent with other studies that have indicated close relationships between domains (noted above). The OCCWG (2001) proposed that factor analysis 'will be required to examine both the a priori consensus based structure and the actual factor structure underlying the scales.' Few studies have previously examined the proposed multidimensionality of OCD relevant belief domains. Principal components analyses of a cognitive intrusions questionnaire has found factors that have been interpreted as inflated responsibility, importance of thought control, overestimation of threat and intolerance of uncertainty domains (Freeston, Ladoceur, Thibodeau & Gagnon, 1992; Freeston, Ladoceur, Gagnon & Thibodeau, 1993). In contrast, a principal component analysis of another scale measuring OCD related beliefs, suggested that intolerance of uncertainty beliefs merged with other obsessional beliefs (including one similar to overestimation of threat), to form a single factor (Sookman & Pinard, 1995; Sookman, Pinard & Engelsmann, 1997 – cited by the OCCWG, 1997).

The principal components analysis of the belief domain subscales in the current study suggests that the belief domains identified by the OCCWG (1997), merge

together to form a single factor. Further studies are needed to verify or refute this finding which include sufficient participants to enable individual items to be used in factor analysis. It is possible that a larger scale, finer grained analysis, with clinical participants may lead to different conclusions. Another possibility is that the close relationship between belief domains observed may be due to properties of the OBQ scales. Items were selected partly on the basis of their content validity assessed by repeated expert review and partly on the basis of their high correlation with OCD symptom measures. This would tend, in contrast to factor analytic techniques of scale development, to emphasise the similarities between domains rather than their differences. In addition priming was not used to assess beliefs (i.e. specifying the context for which respondents should make ratings). For some people, danger related beliefs may only be activated in threatening situations (Beck, Emery & Greenberg, 1985). It is plausible that the lack of priming may have increased the observed relationships between belief domains.

It is also possible that the belief domains do indeed have one underlying dimension that may exist at a deeper level of cognition. Beck (1987) suggests that dysfunctional schema assumptions have at least two levels. At one level are propositional, rule or attitude statements, which correspond to a 'beliefs' level of cognition proposed by the OCCWG, (1997). At a deeper level there are absolute concepts that are not conditional referred to as core beliefs (or schema) which are generally less accessible to consciousness. Belief domain contents in OCD may therefore be manifestations of a more fundamental dysfunctional schema. Mallingen (1984) has previously emphasised the centrality of the obsessional need

for control. He argues that the pre-obsessional child cannot trust external reality and deals with this by 'substituting a defensive irrational belief in his own potential omnipotence.' Similarly Frost et al. (1993) observed that obsessional patients may mistakenly perceive 'that it is possible to have control over events which are largely random or at least controlled by circumstances outside the realm of influence.' It could be speculated that a common theme linking each proposed belief domain might be conceived of as a core belief that both internal and external events can be controlled to an exaggerated (even magical) degree.

The relationship of obsessional beliefs to OCD symptoms

The principal aims of the study were to discover the relative importance of belief domains in explaining variance in OCD symptoms overall, and the relative associations between belief domains and symptoms subtypes. The lack of empirical support for the assumed multidimensionality of OCD beliefs however challenges the notion that it is possible to discover reliable answers to these questions at the current time. The results did indicate however that obsessional belief overall was significantly related to all symptoms of OCD, and this was true when results were controlled for anxiety and depression. A strength of the current study was its use of a measure that assesses a wide range of OCD symptoms. With the effects of anxiety and depression partialled out, obsessional belief was most strongly related to obsession symptoms, and then in descending doubting, washing, ordering and equally (neutralising, hoarding and checking) symptoms. This suggests that obsessional belief is particularly relevant to obsession

symptoms and may be relatively less important for washing, checking and neutralising. These results are consistent with the findings of the OCCWG (2001), in so far as it is possible to make comparison between different symptom measures. However it must be emphasised that further replication with a reliably diagnosed clinical samples is necessary. Future studies also need to use similar measures of symptoms, as well as beliefs, to facilitate comparisons.

Overall the results suggest the importance of obsessional belief in all OCD symptoms. A moderate to high correlation between obsessional belief and the OCD symptom total score was observed, independent of the effect of anxiety and depression, suggesting a strong and specific relationship between them. This conclusion must be qualified by noting that belief domain items were partly chosen on the basis of their correlation with OCD symptoms which would bias results in the observed direction. The current study did however use a different measure of OCD symptoms than the one used for validation, and found stronger relationships overall. Another issue is that by implication all 'individual beliefs' are associated with all symptom subtypes, but belief domains were not of course found to be identical, and there is undoubtedly some unique variance attributable to each. In view of the above results it seems necessary to conduct more research to establish the nature of relationship between domains before confident statements can be made about the relative importance of domains or their relationship to symptom profiles. Finally as with all correlational studies the results do not confirm that beliefs are causative factors in obsessional symptoms. However studies that have manipulated obsessional beliefs and observed

consequent changes in OCD variables would tend to suggest this (e.g. Lopatka & Rachman, 1995; Shafran, 1997; Rassin et al., 1999).

Clinical Implications

The current research suggests that belief domains identified by the OCCWG are less distinct than supposed. However these domains have considerable content validity according to the expert consensus of a large group of eminent OCD clinicians. Even if the above results are replicated, it may remain clinically practical to consider beliefs separately as cognitive techniques can only be developed to target specific domains (i.e. Freeston et al., 1996). Salkovskis (1985; 1989) has proposed that responsibility appraisals are essential for the development of obsessions. There is evidence that most other belief domains are implicated in other anxiety disorders and are not specific to OCD (with the exception of the importance of controlling thought beliefs). To date there is evidence cognitive techniques targeting inflated responsibility beliefs alone (Ladoceur, Leger, Rhéaume, & Dube, 1996) and danger related beliefs alone (Jones & Menzies, 1998b), in OCD patients (without exposure and response prevention) is associated with a reduction in symptoms. The results of the current study imply that belief modification in one domain would have corresponding effects on the others. Overall, the research suggests that targeting other 'belief domains' may also be successful over the whole spectrum of OCD symptoms. Belief modification techniques may facilitate traditional exposure response therapies or provide a viable alternative. However these results do need replication in clinical groups.

Another implication of the research is that there may be a common obsessional schema. Recent trends in cognitive therapy, based on work with challenging client groups, have emphasised the need for interventions directed at modifying schemas (e.g. Beck & Freeman, 1990; Young, 1994). The challenging nature of the OCD patient group, the lack of consistently effective therapies, and the need for schematic restructuring with OCD patients have all been highlighted by Sookman et al. (1994). Identification of obsessional schema, that account for the relationships between domains, would facilitate therapy focusing on schematic restructuring. In contrast to therapy focusing on more peripheral beliefs or behavioural symptoms, this may result in greater clinical improvements.

Conclusion

In summary, it was found that the six belief domains loaded strongly on one component. A summed belief domain score was significantly related to all measured OCD symptoms, with the effects of anxiety and depression partialled out. Clinical implications are that all belief domains may be useful targets of cognitive interventions and attention to deeper levels of cognition may be warranted. Further research is necessary, especially with clinical groups, to determine whether the observed relationship between belief domains results from properties of the OBQ or an actual lack of distinction between them.

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Principal Components Analysis of the Ego-Dystonicity Questionnaire

Summary - The aim of the present study was to determine the psychometric properties of the Ego-Dystonicity Questionnaire in a sample including British student and clinical participants. The component structure partially replicates that obtained previously by Cripps & Purdon (2000), with Canadian students. Some differences are noted however.

INTRODUCTION

Thoughts are said to be ego-dystonic if they are incompatible with a persons ideals or self-conception (Rycroft, 1968). Normal intrusive thoughts have been found to differ from clinical obsessions on a dimension labelled 'alieness to self' (Rachman & De Silva, 1978) and it has been suggested that obsessive thoughts and 'morbid preoccupations' may be distinguished in terms of their ego-dystonic versus ego-syntonic character (Rachman, 1973). Ego-dystonicity of thoughts has subsequently served as a defining feature of obsessions, especially in comparison to worries (APA, 1994; Borkovec, 1994; Langlois *et al.*, 2000a; Turner *et al.*, 1992; Wells & Morrison, 1994). Empirical studies have shown ego-dystonicity to be predictive of escape/avoidance responses thought to be characteristic of obsessive-compulsive disorder (Freeston *et al.*, 1991; Freeston & Ladoceur, 1993; Langlois *et al.*, 2000b) and of frequency of intrusive thoughts (Clark & Claybourn, 1997). Recently ego-dystonicity has been proposed as one of several constructs implicated in the aetiology and persistence of obsessions (Purdon &

Clark, 1999; Clark, 2000). It has been suggested that that the appraisal of a thought being ego-dystonic may represent a threat to self-view (Purdon & Clark, 1999; O'Kearney 1998). This interpretations it is suggested may lead to efforts at controlling the thoughts, that because of paradoxical thought suppression effects would be doomed to fail (Wegner *et al.*, 1987), and thus lead to a vicious cycle.

Given the significance of ego-dystonicity in defining obsessions and evidence of its potential role in the development of obsessions the concept seems relatively under explored. In studies to date it has only been examined with a single item in non-clinical populations. An Ego-Dystonicity Questionnaire has recently been developed however (EDQ: Cripps & Purdon, 2000) and the authors suggest it is a multi-dimensional construct. They propose that the scale may aid appropriate treatment decision-making and develop understanding of the 'escalation and persistence of obsessions'. The aim of the present study is to examine the factor structure of the EDQ with British students and clinical participants.

METHOD

Subjects

116 university students (many mature), took part in the study voluntarily (mean age = 29.4, SD=10.9, male = 28, female = 88).

Procedure

All participants completed the 37-item EDQ (Cripps & Purdon, 2000). It measures the appraisal of a thought as 'being inconsistent with ones personality, habits, preferences and thoughts one would expect oneself to have, as well as one's affective response to the thoughts content'. Participants rate a self-identified ego-dystonic thought on a seven-point scale from strongly disagree (1) to strongly agree (7). Greater scores reflect greater ego-dystonicity. Four subscales [Inconsistency with Morals (Cronbach's Alpha = .85), Dislike of Thought (Cronbach's Alpha = .79), Irrationality of Thought (Cronbach's Alpha = .86), and Implications of Thought for Personality (Cronbach's Alpha = .66)] have emerged previously from a principal components analysis of 151 student participants (Cripps & Purdon, 2000).

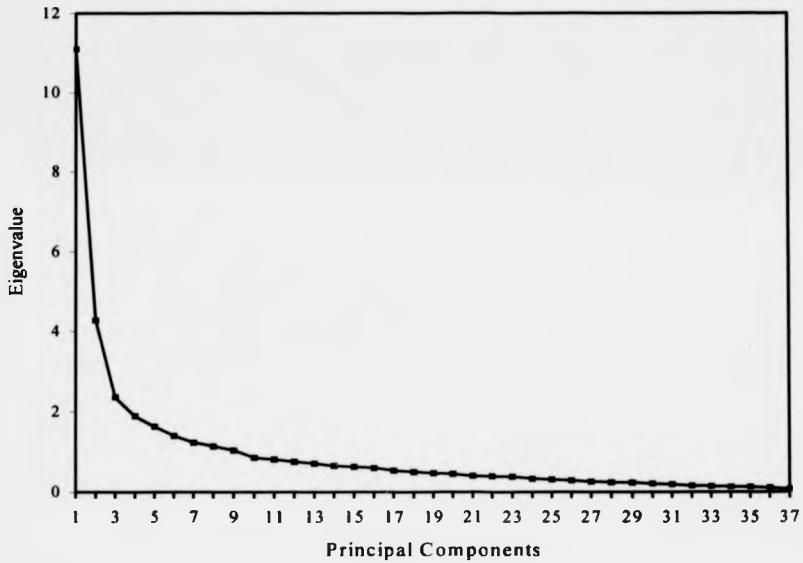
RESULTS

Principal Components Analysis

Principal component analysis (with direct oblimin rotation) of the 37 EDQ items was carried out for all participants (replicating methodology used by Cripps & Purdon, 2000). It has been suggested that examination of the scree plot is agreed

by many factor analysts to be the preferred solution to selecting the correct amount of factors (Kline, 1994). In this case examination of the scree plot shows a break in the slope of the Eigenvalues after four components, indicating a four-component solution (see Figure 3.1).

Figure 3.1. Plot of Eigenvalues of the EDQ item correlation matrix



A criterion loading of $> .40$ was used as the level of component loading significance to make findings comparable with previous analysis and ensure each item only loaded on one factor (See Table 3.1). The amount of items loading on each factor, the strength of loadings, and sample size suggest that the obtained four component solution would be stable across samples according to criteria

suggested by Guadagnoli & Velicer (1988). It accounted for 53% of the variance in EDQ items. Component 1, with an Eigen value of 11.10 accounted for 30% of the variance and had loadings on 10 items (17, 15, 19, 31, 30, 4, 21, 26, 28, 13). This component is characterised as 'Implications of Thought for Personality' as it essentially replicates loadings found by Cripps & Purdon (2000), with the exception of four new items (19, 26, 30, 31). Component 2 had an Eigenvalue of 4.28, accounted for 11.55% of the variance, and had loadings on 8 items (27, 32, 37, 16, 29, 25, 34, 3). This component is characterised as 'Dislike of Thought' as it essentially replicates loadings found by Cripps & Purdon (2000), with the exception that items 32, 37, and 3 are included and item 30 is excluded.

Component 3, had an Eigen value of 2.36, accounted for 6.4% of the variance and loaded on 9 items (7, 5, 6, 9, 11, 2, 23, 24and 35). This component is characterised as 'Inconsistency with Morals' as it essentially replicates loadings found by Cripps & Purdon (2000), with the exception that it differs on four items: it includes items 11 and 2 and excludes 32 and 36. Component 4 had an Eigen value of 1.90 and accounted for 5.11% of the variance and loaded on 5 items (8, 1, 14, 33, and 22). This component is characterised as 'Irrationality of Thought' as it essentially replicates loadings found by Cripps & Purdon (2000), with the exception that it excludes items 31, 10 and 11.

Table 3.1. The component structure (oblique rotation) of the EDQ*

EDQ ITEM	COMPONENT			
	1	2	3	4
1. EDQ17 I need to prove to myself that I am not the kind of person this thought suggests I could be.	.68			
2. EDQ15 It bothers me that I cannot get rid of this thought more easily, given that it is so irrational.	.68			
3. EDQ19. The more I have this thought, the more I worry it is going to come true despite my best intentions.	.62			
4. EDQ31. A person like me should not have thoughts like this.	.60			
5. EDQ30. I typically do just about anything to get this thought out of my head the moment I become aware of it.	.60			
6. EDQ4. The more I have this thought, the more I worry that I will do it despite my efforts at self-control.	.60			
7. EDQ21 When I have this thought, I begin to question my view of myself.	.58			
8. EDQ26. When I have this thought, I must get it out of my mind as quickly as possible and keep it out.	.55			
9. EDQ28. Even though this thought goes against my personality, it doesn't mean anything at all.	-.53			
10. EDQ13. I would be a better person if I did not have thoughts like this.	.53			
11. EDQ27. This thought does not reflect my fantasies.	-.72			
12. EDQ32. The more I have this thought, the more I wonder if part of me wants it to come true	.71			
13. EDQ37. The more I have this thought the more I worry that maybe part of me wants it to come true.	.67			
14. EDQ16. There is nothing appealing to me about this thought coming true in real life.	-.65			
15. EDQ29. I would never want this to happen in real life.	-.61			
16. EDQ25. I would never voluntarily do anything that might make this thought come true in real life.	-.55			
17. EDQ34. This thought makes my stomach turn.	-.53			
18. EDQ3. When I have this thought, I typically do something to assure myself that the thought has not or will not come true in real life.	-.43			
19. EDQ7. This thought is immoral.	-.80			
20. EDQ5. This thought is upsetting because it violates my sense of morality and decency.	-.73			
21. EDQ6. This thought conflicts with my personality, or , my sense of 'who I am'.	-.73			
22. EDQ9. I have never acted out his thought in my life.	-.62			
23. EDQ11. This is not the kind of thought I would expect to have	-.61			
24. EDQ2. I wonder how a person like me could have a thought like this	-.60			
25. EDQ23. This thought violates my sense of what is right.	-.51			
26. EDQ24. This is not the kind of thought I would expect myself to have and so it is rather alarming to me	-.46			
27. EDQ35. I am immoral for having this thought.	-.44			
28. EDQ8. Even though this thought is distressing I understand why I have it	-.80			
29. EDQ1. It doesn't make any sense to me that I would have a thought like this	.71			
30. EDQ14. I can't think of any good reason as to why I have a thought like this.	.70			
31. EDQ33. This thought takes me completely by surprise	.55			
32. EDQ22. This thought is irrational, so I don't understand why I would have it.	.53			

*Component loadings < 0.40 are excluded

Analysis of difference

Some differences to the Cripps and Purdon study are worth noting (see Table 3.2).

The order of extraction changed from Inconsistency with Morals, Irrationality of Thought, Dislike of Thought, and Implications of Thought for Personality (Cripps & Purdon, 2000) to Implications of Thought for personality, Dislike of Thought, Inconsistency with Morals, and Irrationality of Thought. Perhaps the most important aspect of ego-dystonicity in the development of obsessions is the threat to self-view/implications for personality component as outlined by Purdon & Clark (1999). A possible speculation is that the British sample had a greater degree of obsessional symptoms than the Canadian sample and thus importance of the Implications of Thought for Personality factor was emphasised in this analysis.

Table 3. 2. Comparison of order of item loadings and component extraction obtained by Cripps & Purdon (2000) and the current study.*

<i>Component</i>	Cripps & Purdon (2000) ^a	Current study ^b
1. Inconsistency with Morals	(23, 5 , 7, 6, 9 , 32, 35 , 24, 36)	(7, 5 , 6, 9 , 11, 2, 23 , 24 , 35)
2. Irrationality of Thought	(14, 22, 8 , 1 , 33 , 10, 31, 11)	(8 , 1 , 14 , 33 , 22)
3. Dislike of thought	(25, 29, 16 , 27, 30, 34)	(27, 32, 37, 16 , 29 , 25 , 34 , 3)
4 Implications for personality	(17, 4 , 15 , 21, 28 , 13)	(17, 15 , 19, 31, 30, 4 , 21 , 26, 28 , 13)

*Shared Items in Bold

^a Solution accounted for 49.6% of variance. Order of component extraction (1, 2, 3, 4).

^b Solution accounted for 53% of variance. Order of component extraction (4, 3, 1, 2).

The differences in item loadings suggest slight differences in characterisation of components but were not thought sufficient to change the original scoring or

characterisations (see Table 3.2). The Inconsistency of Morals component shares four initial items. It includes two new items that seem to reflect surprise at having the thought, but are consistent with the component: item 11 ("This is not the kind of thought I expect to have") and item 2 ("I wonder how a person like me could have a thought like this"). Two items are omitted (32/36) which do not appear to particularly reflect the inconsistency with morals component and load higher on another component/or moderately on all other components. The 'Irrationality of Thought' component has the same first five loading items in each analysis. Three items are omitted (10,11,31) which do not seem to capture the idea of Irrationality of thought, and all in fact load higher on other components. The 'Dislike of Thought' component is perhaps the component which show greatest difference in this analysis. It includes three new items that load negatively in third and sixth place respectively. They are item 32 ("The more I have this thought the more I wonder if part of me wants it to come true") and item 37 ("The more I have this thought the more I worry if part of me wants it to come true"). These negatively loading items suggest disownership as well as dislike of the thought in the sense of denial that there is any personal truth in the thought. It also includes item 3 which reflects the need for assurance that the thought will not come true. The 'Implications of Thought for Personality' subscale includes four new items that are consistent with the characterisation. Item 19 ("The more I have this thought the more I worry that it is going to come true despite my best intentions") is consistent in the sense that it implies concern that thought may be part of personality. It also suggests additional fears of losing control that is also a characteristic of the component items in the first analysis. Item 31 ("A person like

me should not have thoughts like this") is entirely consistent with the characterisation. The remaining items (26, 30) emphasis is on taking action to dispel the thought. This is consistent with theoretical speculation that dystonic appraisals concerning implications of thought for personality lead to efforts to prove otherwise - and thus are implicated the development of obsessive-compulsive disorder (Purdon & Clark, 1999). These items may create conceptual confusion however because of the possible confound of appraisal and symptom.

DISCUSSION

Overall the results of the present study largely replicate the data obtained by Cripps & Purdon (2000) by providing evidence that Inconsistency with Morals, Irrationality of Thought, Dislike of Thought, and Implications of Thought for Personality represent meaningful domains in a British sample. There are slight differences to the characterisation of components but these are not sufficient to suggest modification of the EDQ, especially as the current study was conducted with a smaller sample. At this stage of research similarities between analyses are emphasised rather than differences. Therefore use of the original scoring is recommended. However the need for further research is indicated, especially with reliably diagnosed obsessional samples, to develop the EDQ as a promising clinical assessment and research tool.

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Reflections on OCD beliefs research

Introduction

Cognitive models of obsessive-compulsive disorder (OCD) broadly assert that it is the negative appraisal of intrusive thoughts not their occurrence per se that leads to symptoms. Researchers have become increasingly interested therefore in beliefs and assumptions that may lead to negative appraisal so they may be the targets of cognitive interventions. My interest in this field grew from early clinical experiences in psychology and I propose to consider how they, and subsequent familiarisation with literature, shaped my research as a clinical psychology trainee. I will then raise some of the wider theoretical issues and reflections that have occurred to me during the research process. Finally I will reflect on how this process, including the result of the research itself, may have influenced me as a researcher and practitioner.

Early Enthusiasm

My first clinical experiences as an assistant psychologist were in a group for clients with OCD, assisting members in the group and in individual sessions, with exposure and response prevention goals. Reading a seminal paper by Salkovksis (1985), outlining how inflated responsibility appraisals were essential to the development of OCD, proved to be a formative experience in appreciating how theory guided practice. Through building alternative non-threatening accounts of

their symptoms using cognitive and behavioural theory, I saw how clients were able to overcome problems, which had often been thought intractable by clients and professionals alike. Salkovskis' CBT model of OCD seemed to be a shining example of the clinical psychological approach. Practical theories were derived through observation of clinical phenomenology and experimental studies. It seemed to me that cognitive-behavioural therapy helped clients overcome severely disabling symptoms, and this was in stark contrast to the general therapeutic nihilism derived from psychoanalysis.

Early Doubts

The opportunity to engage in longer-term work with clients, who had mostly resolved their obsessional symptoms, brought new questions. Clients often seemed to have considerable residual interpersonal difficulties and struggled with issues of dependence, control, sexuality and anger. It did not seem fanciful to think that the themes of obsessions often were closely connected to these difficulties, and may have more meaning than the cognitive model implied. In addition inflated responsibility beliefs did not seem universally present in clients with OCD symptoms, and I speculated that I might have been trying too hard to 'fit' the model to clients. Clearly a structured CBT approach had enormous success in tackling symptoms and explaining their maintenance, but I wondered if a more exploratory approach would be appropriate to help clients resolve relationship difficulties that may cause relapse.

Shaping Research Questions

The cognitive-behavioural OCD literature suggested that beliefs other than inflated responsibility were important in the development of obsessional problems. A group of international OCD experts had agreed that six belief domains including inflated responsibility were likely to be relevant (OCCWG, 1997). Closer scrutiny of the evidence for the importance of responsibility beliefs also suggested this as the majority of studies observed fairly modest correlations with symptoms. This dispelled the impression gained from much of the literature that responsibility beliefs were essential for the development of OCD. I reflected however that their importance was already being enshrined in clinical mythology. My curiosity was stimulated about proposals that other beliefs or assumptions were relevant, and may even rival the importance of responsibility beliefs. This formed the basis for the current research. Before returning to this question two additional areas of interest will be mentioned.

Psychoanalytic Contributions

As CBT research seemed predominantly concerned with maintenance rather than with aetiology of OCD, the origins of beliefs seemed obscure. For instance how did seemingly bizarre thought action-fusion beliefs (including the notion that thoughts can increase the probability of events) originate? I wondered what the psychoanalytic literature might suggest and the notion of 'omnipotence of thoughts', described by Freud, appeared to be similar. Indeed following from

Freud's ideas, Meares (1986) suggested that individuals with omnipotent beliefs have not formed a mature conception of an inner life being distinct from an outer world. The resulting interplay of dangers of contagion creeping in and harm inflicted by thoughts seeping out, he argued led to escalating anxiety and the construction of a 'magical counterworld' (through rituals) to shield from dangers. The lack of an adequate self-boundary he hypothesised was promoted by overprotective parents who impeded opportunities for reality testing experiences. The analytic literature appeared to be far richer in terms of theory concerning the origins of obsessional beliefs. It seemed astonishing however that the general consensus, after nearly a century of thought, was that little has been added to Freud's basic views (Esman, 2001). In addition the lack of symptom relief achieved by psychoanalytic approaches was surprising considering that OCD was almost a prototypical disorder in highlighting the struggle between unconscious drives and moral demands. Esman noted however the "virtual absence of psychoanalytic contributions in the previous three decades in to the illness that Freud considered to be 'the most interesting and repaying object of psychoanalytical research.' "

Ego-Dystonic Appraisals

Observations of the commonplace nature of intrusive thoughts have been combined with cognitive theory to suggest obsessional thinking is rooted in the negative interpretation of intrusions. One of the dimensions however found to distinguish obsessions from normal intrusive thoughts (and worries) was their 'alien' ego-dystonic nature. Recently Purdon & Clark (1999) suggested that the

appraisal of a thought being ego-dystonic may represent a threat to the self-view and 'maybe the very thing that causes it to become an obsession.' Similarly O'Kearney (1998) suggests that intrusions, for example concerning potential hostility, might result in a potentially damaging self-discrepancy leading to neutralisation to resolve the discrepancy. While cognitive interventions through normalising the experience of intrusive thoughts may also reduce the dystonic nature of appraisals, Purdon & Clark (1999) suggested treatment might benefit from the additional consideration of the meaning of thoughts for self-identity. More controversially, O'Kearney (1998) conceives of intrusive thoughts 'as responses to various contextual factors in the patients intrapsychic and interpersonal environment' and proposed that a useful therapeutic strategy would be to explore unacknowledged emotional ambivalence. This was criticised by Salkovskis & Freeston (2001): 'his proposal has the unfortunate capacity to increase negative appraisal and lower self-esteem without helping the sufferer resolve their obsessional symptoms.' These debates stimulated my interest in the concept ego-dystonicity and the idea that intrusive thought may be more meaningful than cognitive models imply.

Motivation for Research

The development of measures of OCD relevant belief domains by the OCCWG (2001) made it possible to try and assess which of many beliefs were most important in OCD and if these beliefs are differentially associated with symptom profiles. In addition an opportunity presented itself to try and replicate the factor

structure of the first available measure of ego dystonicity. Just as Salkovskis's inflated responsibility model of OCD was helpful to me as I began clinical work, I imagined this kind of research might help inform clinicians about the key beliefs to assess in OCD. The possibility that different belief domains would emerge as being associated with specific symptom subtypes seemed exciting.

Reflections on appraisal theories and the origins of intrusive thoughts

At various times in the research process I struggled to describe the relationship of beliefs to negative appraisals. Do beliefs underlie, motivate, result in, influence, or cause appraisals? Mackay (1995) suggests that although cognitive therapies try to appear solidly scientific statements about beliefs are not sufficient for explanation. Similarly McNally (2001) notes explanations in terms of beliefs and catastrophic misinterpretations beg the question about what causes them, and are thus 'only the beginning the enquiry.' O'Kearney (1998) criticises cognitive-behavioural theories of OCD specifically for not seriously considering factors that may account for the occurrence of intrusive thoughts. As noted he argues that intrusive thoughts 'have a substantive relationship with the sufferer's concerns' and thus cognitive theories ignore their thematic significance. In response to this critique Salkovskis & Freeston (2001) suggest that production of intrusive thoughts is part of a problem solving process: "That is a stream of ideas are spontaneously generated around current concerns by an 'idea generator'." O'Kearney (2001) however notes the "non-committal stance on relationship between obsession and concerns implied by the word 'around'" and argues the vagueness is a result of

misguided commitment to the idea that obsessions are initially emotionally neutral. These exchanges become increasingly polarised, but served to deepen my awareness about possible theoretical shortcomings of appraisal theories. It seems fair to suggest that cognitive models could be clearer about causality and the possible origins of relevant assumptions. For instance, the resort to explanatory concepts like 'idea generators' begs even more questions. It also seems fair however to point out, as Salkovskis does, that attention to the origins of intrusive thoughts has generated little in the way of successful therapeutic strategies.

Initial Data

Returning to the more practical task of recruiting participants I began to understand why the majority of knowledge of cognitive processes in OCD is derived from student populations. After obtaining ethical permission from three NHS trusts, telephoning clinicians, sending information, telephoning again, and feeling like a salesman for my research over many months, I was rewarded with 12 clinical participants. As data was collected my interest in the possible results grew. It was paralleled however by the increasing recognition that previous studies of OCD relevant beliefs indicated that the belief domains are highly related. I felt uneasy thinking about the implications of this and wondered if the researchers in these studies felt the same way, as they acknowledged that beliefs might overlap but never went further. It seemed easy to suggest plausible interconnections between nearly all beliefs and imagine they may interact in an idiosyncratic manner. Appraisal theories essentially suggest a sequential process.

of particular beliefs leading to particular appraisals which eventually results in symptoms. I wanted to find out if particular beliefs were associated with particular symptoms. As Mackay (1995) points out however cognitive appraisal theories unlike cognitive experimental theories pay 'little attention to the syntax, the rules of processing, structuring and ordering of cognition.' Again I had to consider how appraisal theories might considerably oversimplify reality. Perhaps they are better as clinically useful stories than scientific theories?

Denial of Results

One of the major findings of my research was a high degree of correlation between all belief domains. One of these studies had proceeded to use individual beliefs as independent variables in a regression analyses contrary to statistical good practice. However it crossed my mind to follow their lead! I speculated that researchers examining beliefs within the cognitive model of OCD have been trying prematurely to order, categorise and isolate complex phenomena. Were they ignoring the evidence? I was attached to the idea that specific belief domains may be associated with different OCD symptom profiles. It was not hard for me to imagine therefore that a researcher who had spent years seeking evidence for the importance of one belief domain may be reluctant to consider that it may be so highly related to other beliefs as to be virtually indistinguishable. In addition as so many other intervening processes are implicated in the formation of OCD symptoms, the possible individual permutations might be so numerous, as to prevent any consistent association of particular beliefs with particular symptoms.

Obsessional Schema?

My research suggested that the beliefs measured did not form separate domains I began to speculate about what may be a common theme and was struck by Mallinger's (1984) emphasis on the obsessional need for control. He proposed that the pre-obsessional child, as a result of inconsistent early experience, develops a defensive myth as follows: 'If I try hard enough, I can maintain control over anything and everything that might affect me, and thus protect myself from all potential dangers. I can control my own thoughts, feelings and actions; the opinions of relevant others toward me; and the miscellaneous potential danger in life, such as illness, accidents, misfortune and even death!' I speculated that an obsessional core belief, linking belief domains, would be similar to this myth and seemed to 'fit' with my experience of OCD patients. Thus the individual belief domains may be emergent properties of this core belief (which by definition would be less accessible to consciousness). At the very least it is true that little attention had been paid to possible obsessional core beliefs. However even if an underlying core belief did exist and could be identified, cognitive behavioural therapy would begin by targeting key lower order cognitions. Changes in any underlying dimension at a deeper level of cognition may occur as a secondary effect of treating lower order beliefs. Mansell (2000) presents evidence to support the view that changes in conscious appraisal can lead to changes in automatic processes presumably via changes in higher order beliefs or schema. However following cognitive theory a more direct focus on underlying schema may result in greater success and lower relapse rates. Purdon & Clark's (1999) consideration

of ego-dystonic appraisals could also imply that attention to obsession schema/core belief is warranted. They suggest: 'It is possible that individuals not vulnerable to obsessional problems hold more varied and flexible self schemata, so that if one schema is violated by the occurrence of an inconsistent thought (i.e. dystonic) the self-view is less likely to be challenged.'

If such close relationships between belief domains are consistently observed and are not particular properties of their measures it also suggested abandoning the notion that certain belief domains will be reliably associated with symptom profiles or a most important domain will be identified. Perhaps it also implied that modification of one 'belief' would lead to change in others, possibly via an underlying dimension, so at least in theory, it did not matter what belief is targeted. This implication has led me to consider the degree to which research can guide practice however. Of course formulation may be guided by the research, and assessment measures, but as Freeston, Rhéaume & Ladouceur (1996) note: 'individual analysis is the key to effective treatment...determining the optimal order for cognitive targets is a problem that can be addressed clinically.' It seemed to me that an overreliance on aggregated research results in guiding treatment direction may lead to poor practice in the sense of imposing models on patients that are not suited to their unique needs.

How has research process affected me as researcher?

I have gained a greater understanding of research methodologies. As a result I think I am more aware of what evidence is necessary to draw certain conclusions and I am more able to be critical. I am perhaps more aware that clinical 'truths' (or myths!) may arise as much from the momentum of research as from empirical evidence. Closer scrutiny of the actual evidence, for instance, for the importance of inflated responsibility beliefs in OCD led to me to quite different conclusions than the impressions I gained from more casual reading of the literature. Through knowledge of my own desire to find a certain type of result, I have begun to appreciate how full time researchers may naturally become attached to their ideas. In my case I think I was drawn to finding results that may oversimplify a complex disorder. A greater knowledge of the research area combined with appreciation of wider theoretical criticisms has also enabled me to question some of the assumptions of the cognitive behavioural theories of OCD. Also the research process has increased my awareness of divergence between the views of statisticians and applied psychologists about what constitutes 'necessary' evidence. The need to understand techniques used as fully as possible has therefore been highlighted. At the same time I now fully appreciate the difficulties involved in conducting good research. It can be hard to meet all necessary methodological criteria especially as a practising clinician. In particular the obstacles involved in obtaining clinical samples are offputting. It seems a pity that the majority of research in the field of OCD is conducted with student samples. While understanding the need for stringent ethical processes I wonder if they

could be graded according to potential risk of a type of research. For instance asking clients to complete clinical questionnaires designed by reputable academic practitioners does initially seem to involve less potential risk than giving untried drugs to medical patients.

How has the research process affected me as practitioner?

As a practitioner I continue to have great respect for researchers' efforts to inform clinical practice but perhaps have a greater appreciation of its limits to do so. Through a more in depth knowledge of one clinical area I think I have more appreciation of what actually constitutes evidence as opposed to enthusiasm for the 'latest craze.' I speculate that the worst scenario of evidence based practice followed slavishly would be that clients are not understood as individuals. While I remain enthusiastic about a CBT approach to OCD the research process has shown me that inflated responsibility beliefs are not the only beliefs that are strongly related to OCD symptoms. Perhaps most importantly the research has indicated that beliefs are highly related. This has led me to consider in much greater depth what may constitute more fundamental obsessional belief which has been informed by greater familiarisation with mostly psychoanalytic literature. This has in turn led to greater consideration of how 'obsessional belief' is connected to relationship issues. Thinking about the potential implications of dystonic appraisals and possible treatment strategies has highlighted the conflict between psychodynamic and CBT treatment approaches. Would ego-dystonic appraisals be best reduced by normalising the experience of intrusive thoughts or by helping clients consider that intrusive thoughts may point to unacknowledged

and important interpersonal themes? While it seems easy to dismiss psychodynamic theories because of their lack of therapeutic success, CBT theories (traditionally) seem to have little to say once symptom control is achieved and are not consistently effective. When clear themes are apparent between intrusive thoughts and a client's concerns it seems appropriate to consider these in therapy and perhaps trace them to early events. It may be clinically most appropriate to focus on symptom control using CBT formulations in the first stage of therapy however. In my view a comprehensive treatment would often involve going beyond symptom control using either a schema based or psychodynamic approach.

The research process has facilitated consideration of the strengths and weaknesses of different models of disorder in more depth and fostered a belief that clinicians using them have a lot to learn from each other (in contrast to becoming entrenched in dogmatic positions). Overall the process has provoked far more questions than it has answered and a feeling that I really need to gain more clinical experience!

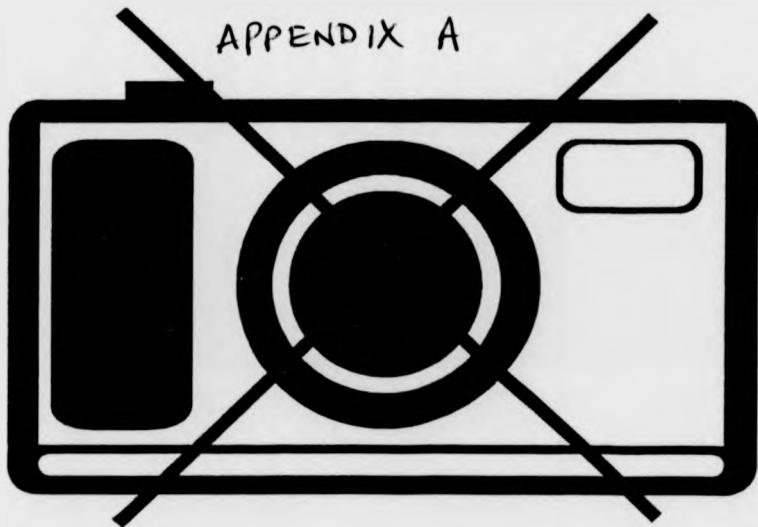
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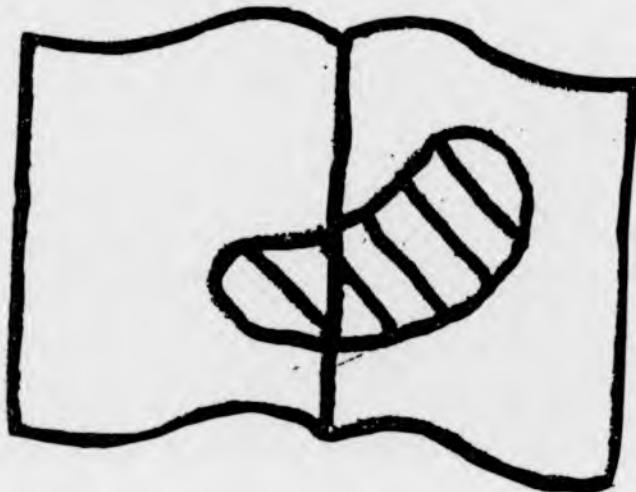
APPENDIX A



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PRINT BOUND INTO SPINE
- APPENDIX B -



**Belief domain definitions for the Obsessive Beliefs Questionnaire
(OBQ: OCCWG, 2001)**

Inflated responsibility: 'The belief that one has power, which is pivotal to bring about or prevent subjectively crucial negative outcomes. These outcomes are perceived as essential to prevent. These may be actual, that is having consequences in the real world and/or at a moral level'

Overimportance of thoughts: 'The belief that the mere presence of a thought indicates that it is important. Beliefs may reflect thought-action fusion and magical thinking'

Need to control thoughts: 'The overvaluation of the importance of exerting complete control over intrusive thoughts, images, impulses and the belief that this is both possible and desirable.'

Overestimation of threat: 'An exaggeration of the probability or severity of harm.'

Intolerance of uncertainty: 'Beliefs about the necessity for being certain, beliefs that one has poor capacity to cope with unpredictable danger, and beliefs about the difficulty of adequate functioning in inherently ambiguous situations.'

Perfectionism: 'The belief that there is a perfect solution to every problem, that doing something without mistakes is not only possible but necessary, and that even minor mistakes have serious consequences.'

OBSESSIVE BELIEFS INVENTORY

Thank you for agreeing to complete this questionnaire. Your contribution is valuable in helping to understand the nature of beliefs that affect obsessive compulsive problems and develop more effective therapies.

The questionnaire usually takes between 15 and 45 minutes to complete, and you will need to read the instructions for each section. Please try and answer every question. It is important to remember that there are no right or wrong answers. It is better to give your first approximate 'gut' response than to think too long about any question. Please also note that there are questions on both sides of the page.

The complete questionnaire should be returned to your therapist in the stamped addressed envelope provided. Your answers are strictly confidential and your contribution is anonymous.

PERSONAL DETAILS

Please you could answer the following questions. It is OK to give an approximate answer if you are unable to be exact.

How old are you?

What is your gender (i.e. m/f)?

How long have you had obsessional symptoms? (If applicable)

How many times have you received treatment (i.e. care episodes) from a mental health professional (i.e. Psychiatric Nurse, Psychiatrist, Clinical Psychologist, Counsellor, Psychotherapist, Occupational Therapist) for your obsessional symptoms? (If applicable)

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OBSESSIVE BELIEFS QUESTIONNAIRE

This questionnaire lists different attitudes or beliefs that people sometimes hold. Read each statement carefully and decide how much you agree or disagree with it.

For each of the statements, choose the number matching the answer that *best describes how you think*. Because people are different, there are no right or wrong answers.

To decide whether a given statement is typical of your way of looking at things, simply keep in mind what you are like *most of the time*.

Use the following scale:

1 Disagree very much	2 Disagree mostly	3 Disagree a little	4 Neither disagree or agree	5 Agree a little	6 Agree moderately	7 Agree very much
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In making your ratings, try to avoid using the middle part of the scale (4), but rather indicate whether you usually disagree or agree with the statements about your own beliefs and attitudes.

- | | |
|--|---------------|
| 1. Having bad thoughts or urges means I'm likely to act on them. | 1 2 3 4 5 6 7 |
| 2. Having control over my thoughts is a sign of good character. | 1 2 3 4 5 6 7 |
| 3. If I am uncertain, there is something wrong with me. | 1 2 3 4 5 6 7 |
| 4. If I imagine something bad happening, then I am responsible for making sure that it doesn't happen. | 1 2 3 4 5 6 7 |
| 5. If I don't control my unwanted thoughts, something bad is bound to happen. | 1 2 3 4 5 6 7 |
| 6. I often think things around me are unsafe. | 1 2 3 4 5 6 7 |
| 7. When I hear about a tragedy, I can't stop wondering if I am responsible in some way. | 1 2 3 4 5 6 7 |
| 8. Whenever I lose control of my thoughts, I must struggle to regain control. | 1 2 3 4 5 6 7 |
| 9. I am much more likely to be punished than are others. | 1 2 3 4 5 6 7 |
| 10. If I'm not absolutely sure of something, I'm bound to make a mistake. | 1 2 3 4 5 6 7 |
| 11. There is only one right way to do things. | 1 2 3 4 5 6 7 |
| 12. I would be a better person if I gained more control over my thoughts. | 1 2 3 4 5 6 7 |
| 13. Things should be perfect according to my own standards. | 1 2 3 4 5 6 7 |
| 14. The more distressing my thoughts are, the greater the risk that they will come true. | 1 2 3 4 5 6 7 |
| 15. I can have no peace of mind as long as I have intrusive thoughts. | 1 2 3 4 5 6 7 |
| 16. Things that are minor annoyances for most people seem like disasters for me. | 1 2 3 4 5 6 7 |

1 Disagree very much	2 Disagree mostly	3 Disagree a little	4 Neither disagree or agree	5 Agree a little	6 Agree moderately	7 Agree very much
7. I must know what is going on in my mind at all times so I can control my thoughts.				1 2 3 4 5 6 7		
8. The more I think of something horrible, the greater the risk it will come true.				1 2 3 4 5 6 7		
9. In order to be a worthwhile person, I must be perfect at everything I do.				1 2 3 4 5 6 7		
10. When I see any opportunity to do so, I must act to prevent bad things from happening.				1 2 3 4 5 6 7		
11. It is ultimately my responsibility to ensure that everything is in order.				1 2 3 4 5 6 7		
12. If I fail at something, I am a failure as a person.				1 2 3 4 5 6 7		
13. Even if harm is very unlikely, I should try to prevent it at any cost.				1 2 3 4 5 6 7		
14. For me, having bad urges is as bad as actually carrying them out.				1 2 3 4 5 6 7		
15. I must think through the consequences of even my smallest actions.				1 2 3 4 5 6 7		
16. If an unexpected change occurs in my daily life, something bad will happen.				1 2 3 4 5 6 7		
17. If I don't act when I foresee danger, then I am to blame for any consequences.				1 2 3 4 5 6 7		
18. If I can't do something perfectly, I shouldn't do it at all.				1 2 3 4 5 6 7		
19. I must be ready to regain control of my thinking whenever an intrusive thought or image occurs.				1 2 3 4 5 6 7		
20. Bad things are more likely to happen to me than to other people.				1 2 3 4 5 6 7		
21. I must work to fulfil my full potential at all times.				1 2 3 4 5 6 7		
22. It is essential for me to consider all possible outcomes of a situation.				1 2 3 4 5 6 7		
23. Even minor mistakes mean a job is not complete.				1 2 3 4 5 6 7		
24. If I have aggressive thoughts or impulses about my loved ones, this means I may secretly want to hurt them.				1 2 3 4 5 6 7		
25. I must be certain of my decisions.				1 2 3 4 5 6 7		
26. If someone does a task better than I do, that means I failed the whole task.				1 2 3 4 5 6 7		
27. If I have an intrusive thought while I'm doing something, what I'm doing will be ruined.				1 2 3 4 5 6 7		
28. In all kinds of daily situations, failing to prevent harm is just as bad as deliberately causing harm.				1 2 3 4 5 6 7		
29. Avoiding serious problems (for example, illness or accidents) requires constant effort on my part.				1 2 3 4 5 6 7		
30. Small problems always seem to turn into big ones in my life.				1 2 3 4 5 6 7		

1 Disagree very much	2 Disagree mostly	3 Disagree a little	4 Neither disagree or agree	5 Agree a little	6 Agree moderately	7 Agree very much
1. For me, not preventing harm is as bad as causing harm.				1 2 3 4 5 6 7		
2. I should be upset if I make a mistake.				1 2 3 4 5 6 7		
3. I should make sure others are protected from any negative consequences of my decisions or actions.				1 2 3 4 5 6 7		
4. If I exercise enough will power, I should be able to gain complete control over my mind.				1 2 3 4 5 6 7		
5. For me, things are not right if they are not perfect.				1 2 3 4 5 6 7		
6. Having nasty thoughts means I am a terrible person.				1 2 3 4 5 6 7		
7. I often believe I am responsible for things that other people don't think are my fault.				1 2 3 4 5 6 7		
8. If an intrusive thought pops into my mind, it must be important.				1 2 3 4 5 6 7		
9. Thinking about a good thing happening can prevent it from happening.				1 2 3 4 5 6 7		
10. If I do not take extra precautions, I am more likely than others to have or cause a serious disaster.				1 2 3 4 5 6 7		
11. If I don't do as well as other people, that means I am an inferior person.				1 2 3 4 5 6 7		
12. I believe that the world is a dangerous place.				1 2 3 4 5 6 7		
13. In order to feel safe, I have to be as prepared as possible for anything that could go wrong.				1 2 3 4 5 6 7		
14. To avoid disasters, I need to control all the thoughts or images that pop in to my mind.				1 2 3 4 5 6 7		
15. I should not have bizarre or disgusting thoughts.				1 2 3 4 5 6 7		
16. For me, making a mistake is as bad as failing completely.				1 2 3 4 5 6 7		
17. It is essential for everything to be clear-cut, even in minor matters.				1 2 3 4 5 6 7		
18. Having a blasphemous thought is a sinful as committing a sacrilegious act.				1 2 3 4 5 6 7		
19. I should be able to rid my mind of unwanted thoughts.				1 2 3 4 5 6 7		
20. I should be 100% certain that everything around me is safe.				1 2 3 4 5 6 7		
21. I am more likely than other people to accidentally cause harm to myself or to others.				1 2 3 4 5 6 7		
22. For me, even slight carelessness is inexcusable when it might affect other people.				1 2 3 4 5 6 7		
23. If something unexpected happens, I will not be able to cope with it.				1 2 3 4 5 6 7		
24. Having bad thoughts means I am weird or abnormal.				1 2 3 4 5 6 7		

1 Disagree very much	2 Disagree mostly	3 Disagree a little	4 Neither disagree or agree	5 Agree a little	6 Agree moderately	7 Agree very much
65. I must be the best at things that are important to me.					1 2 3 4 5 6 7	
66. Having an unwanted sexual thought or image means I really want to do it.					1 2 3 4 5 6 7	
67. If my actions could have even a small effect on a potential misfortune, I am responsible for the outcome.					1 2 3 4 5 6 7	
68. Even when I am careful, I often think that bad things will happen.					1 2 3 4 5 6 7	
69. Having intrusive thoughts means I'm out of control.					1 2 3 4 5 6 7	
70. It is terrible to be surprised.					1 2 3 4 5 6 7	
71. Even if I think harm is very unlikely, I should still try to prevent it.					1 2 3 4 5 6 7	
72. Harmful event will happen unless I am very careful.					1 2 3 4 5 6 7	
73. I should go to great lengths to get all the relevant information before I make decision.					1 2 3 4 5 6 7	
74. I must keep working at something until it's done exactly right.					1 2 3 4 5 6 7	
75. Being unable to control unwanted thoughts will make me physically ill.					1 2 3 4 5 6 7	
76. Having violent thoughts means I will lose control and become violent.					1 2 3 4 5 6 7	
77. To me, failing to prevent a disaster is as bad as causing it.					1 2 3 4 5 6 7	
78. If I don't do a job perfectly, people won't respect me.					1 2 3 4 5 6 7	
79. Even ordinary experiences in my life are full of risk.					1 2 3 4 5 6 7	
80. When things go too well for me, something bad will follow.					1 2 3 4 5 6 7	
81. If I take sufficient care, I can prevent any harmful accident from occurring.					1 2 3 4 5 6 7	
82. When anything goes wrong in my life, it is likely to have terrible effects.					1 2 3 4 5 6 7	
83. Having a bad thought is morally no different than doing a bad deed.					1 2 3 4 5 6 7	
84. No matter what I do, it won't be good enough.					1 2 3 4 5 6 7	
85. I often think that I will be overwhelmed by unforeseen events.					1 2 3 4 5 6 7	
86. If I don't control my thoughts, I'll be punished.					1 2 3 4 5 6 7	
87. I need the people around me to behave in a predictable way.					1 2 3 4 5 6 7	

OBSESSIVE COMPULSIVE INVENTORY

Appendix E

The following statements refer to experiences which many people have in their everyday lives. Under the column labelled FREQUENCY, CIRCLE the number next to each statement that best describes how **FREQUENTLY YOU HAVE HAD THE EXPERIENCE IN THE LAST MONTH**. The numbers in this column refer to the following verbal labels:

0 = Never	1 = Almost Never	2 = Sometimes	3 = Often	4 = Almost Always
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Then, in the column labelled DISTRESS, CIRCLE the number that best describes HOW MUCH that experience has **DISTRESSED OR BOthered You DURING THE LAST MONTH**. The numbers in this column refer to the following verbal labels:

0 = Never	1 = Almost Never	2 = Sometimes	3 = Often	4 = Almost Always	FREQUENCY	DISTRESS
1. Unpleasant thoughts come into my mind against my will and I cannot get rid of them.		0 1 2 3 4	0 1 2 3 4			
2. I think contact with bodily secretions (perspiration, saliva, blood, urine, etc.) may contaminate my clothes or somehow harm me.		0 1 2 3 4	0 1 2 3 4			
3. I ask people to repeat things to me several times even though I understood them the first time.		0 1 2 3 4	0 1 2 3 4			
4. I wash and clean obsessively.		0 1 2 3 4	0 1 2 3 4			
5. I have to review mentally past events, conversations and actions to make sure that I didn't do something wrong.		0 1 2 3 4	0 1 2 3 4			
6. I have saved up so many things that they get in the way.		0 1 2 3 4	0 1 2 3 4			
7. I check things more often than necessary.		0 1 2 3 4	0 1 2 3 4			
8. I avoid using public toilets because I am afraid of disease or contamination.		0 1 2 3 4	0 1 2 3 4			
9. I repeatedly check doors, windows drawers etc.		0 1 2 3 4	0 1 2 3 4			
10. I repeatedly check gas and water taps and light switches after turning them off.		0 1 2 3 4	0 1 2 3 4			
11. I collect things I don't need.		0 1 2 3 4	0 1 2 3 4			
12. I have thoughts of having hurt someone without knowing it.		0 1 2 3 4	0 1 2 3 4			
13. I have thoughts that I might want to harm myself or others.		0 1 2 3 4	0 1 2 3 4			
14. I get upset if objects are not arranged properly.		0 1 2 3 4	0 1 2 3 4			
15. I feel obliged to follow a particular order in dressing, undressing and washing myself.		0 1 2 3 4	0 1 2 3 4			
16. I feel compelled to count while I am doing things.		0 1 2 3 4	0 1 2 3 4			

0 = Never	1 = Almost Never	2 = Sometimes	3 = Often	4 = Almost Always	FREQUENCY	DISTRESS
17. I am afraid of impulsively doing embarrassing or harmful things.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
18. I need to pray to cancel bad thoughts or feelings.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
19. I keep on checking forms or other things I have written.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
20. I get upset at the sight of knives, scissors and other sharp objects in case I lose control with them.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
21. I am excessively concerned about cleanliness.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
22. I find it difficult to touch an object when I know it has been touched by strangers or certain people.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
23. I need things to be arranged in a particular order.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
24. I get behind in my work because I repeat things over and over again.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
25. I feel I have to repeat certain numbers.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
26. After doing something carefully, I still have the impression I have not finished it.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
27. I find it difficult to touch garbage or dirty things.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
28. I find it difficult to control my own thoughts.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
29. I have to do things over and over again until it feels right.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
30. I am upset by unpleasant thoughts that come into my mind against my will.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
31. Before going to sleep I have to do certain things in a certain way.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
32. I go back to places to make sure that I have not harmed anyone.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
33. I frequently get nasty thoughts and have difficulty in getting rid of them.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
34. I avoid throwing things away because I am afraid I might need them later.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
35. I get upset if others change the way I have arranged my things.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
36. I feel that I must repeat certain words or phrases in my mind in order to wipe out bad thoughts, feelings or actions.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
37. After I have done things, I have persistent doubts about whether I really did them.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
38. I sometimes have to wash or clean myself simply because I feel contaminated.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
39. I feel that there are good and bad numbers.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
40. I repeatedly check anything which might cause a fire.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
41. Even when I do something very carefully I feel that it is not quite right.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
42. I wash my hands more often or longer than necessary.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

Please ignore the numbers on each item and underline the reply which comes closest to how you have been feeling past week. Don't take too long over your replies, your immediate reaction to each item will probably be more accurate than a long thought-out response.

I feel tense or wound up: lost of the time lot of the time time to time not at all	I feel as if I am slowed down: 3 Nearly all the time 2 Very often 1 Sometimes 0 Not at all
I still enjoy the things I used to enjoy: Definitely as much Not quite so much Only a little Hardly at all	I get a sort of frightened feeling like butterflies in the stomach 0 Not at all. 1 Occasionally 2 Quite often 3 Very often
I get a sort of frightened feeling as if something awful is about to happen: Very definitely and quite badly Yes, but not too badly A little, but it doesn't worry me Not at all	I have lost interest in my appearance: 3 Definitely 2 I don't take so much care as I should 1 I may not take quite as much care 0 take just as much care as ever
I can laugh and see the funny side of things As much as I always could Not quite as much now Definitely not so much now. Not at all	I feel restless as if I have to be on the move 3 Very much indeed 2 Quite a lot. 1 Not very much 0 Not at all
Worrying thoughts go through my mind: A great deal of the time A lot of the time From time to time, but not too often Only occasionally	I look forward with enjoyment to things: 0 As much as I ever did 1 Rather less than I used to 2 Definitely less than I used to 3 Hardly at all
I feel cheerful: Not at all Not often Sometimes. Most of the time	I get sudden feelings of panic: 3 Very often indeed. 2 Quite often 1 Not very often 0 Not at all.
I can sit at ease and feel relaxed: Definitely Usually Not often Not at all	I can enjoy a good book, radio or TV programme: 0 Often. 1 Sometimes 2 Not often 3 Seldom

Nearly everyone experiences unpleasant and unwanted thoughts, although people vary in how frequently they occur and how distressing they are. We are interested in some of these kinds of thoughts that you may have had. These can occur in several forms, such as images, like a picture in our heads, impulses to do or say something, or just thoughts about something. Specifically, we are interested in unpleasant and unwanted thoughts which you perceive as inconsistent with how you view yourself. Such thoughts are in conflict with important parts of yourself, such as your morals, attitudes, beliefs, preferences, habits, behaviours, or rationality. These thoughts are not simply inconsistent with how you would like to view yourself; rather, they do not seem to fit with who you truly believe you are. Here are some examples of the kinds of unwanted and unpleasant thoughts which many people perceive as inconsistent with their personalities. 1. An individual who loves their family having a thought about physically attacking or harming a family member; 2. An individual having thoughts of contaminating others even though they know it is irrational; 3. An individual having a thought of sexually molesting a child even though the idea is repugnant and they believe such an act to be immoral.

Please list a thought you have had which you perceived as unpleasant unwanted and inconsistent with your personality.

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Now visualising this thought please answer the following questions in relation to it. For each of the statements below, circle the number matching the answer that *best describes how you think about it. Because people are different, there are no right or wrong answers. To decide whether a given statement is typical of your way of looking at things, simply keep in mind what you are like *most of the time**

1	2	3	4	5	6	7
Strongly disagree	Disagree mostly	Disagree a little	Neither disagree or agree	Agree a little	Agree moderately	Strongly agree
1. It doesn't make any sense to me that I would have a thought like this.	2	3	4	5	6	7
2. I wonder how a person like me could have a thought like this.	1	2	3	4	5	6
3. When I have this thought, I typically do something to assure myself that the thought has not or will not come true in real life.	1	2	3	4	5	6
4. The more I have this thought, the more I worry that I will actually do it despite my efforts at self-control.	1	2	3	4	5	6
5. This thought is upsetting because it violates my sense of morality and decency.	1	2	3	4	5	6
6. This thought conflicts with my personality, or, my sense of 'who I am'.	1	2	3	4	5	6

Pagination Error

PAGES 112 TO 117 NOT INCLUDED
IN PAGINATION

1 Strongly disagree	2 Disagree mostly	3 Disagree a little	4 Neither disagree or agree	5 Agree a little	6 Agree moderately	7 Strongly agree
7. This thought is immoral.					1 2 3 4 5 6 7	
8. Even though this thought is distressing, I understand why I have it.					1 2 3 4 5 6 7	
9. I have never acted out this thought in the past.					1 2 3 4 5 6 7	
10. Although the thought's content is disturbing, I am not disturbed by the fact that I would have such a thought in the first place.				1	2 3 4 5 6 7	
11. This is not the kind of thought I expect myself to have.					1 2 3 4 5 6 7	
12. I <u>never</u> want to have this thought again.					1 2 3 4 5 6 7	
13. I would be a better person if I did not have thoughts like this.					1 2 3 4 5 6 7	
14. I can't think of any good reason as to why I would have a thought like this.					1 2 3 4 5 6 7	
15. It bothers me that I cannot get rid of this thought more easily, given that it is so irrational.					1 2 3 4 5 6 7	
16. There is nothing appealing to me about this thought coming true in real life.					1 2 3 4 5 6 7	
17. I need to prove to myself that I am not the kind of person this thought suggests I could be.					1 2 3 4 5 6 7	
18. This thought is repulsive.					1 2 3 4 5 6 7	
19. The more I have this thought, the more I worry it is going to come true despite my best intentions.					1 2 3 4 5 6 7	
20. This thought means I care about other people.					1 2 3 4 5 6 7	
21. When I have this thought, I begin to question my view of myself.					1 2 3 4 5 6 7	
22. This thought is irrational, so I don't understand why I would have it.					1 2 3 4 5 6 7	
23. This thought violates my sense of what is right.					1 2 3 4 5 6 7	
24. This is not the kind of thought I would expect myself to have and so it is rather alarming to me.					1 2 3 4 5 6 7	
25. I would never voluntarily do anything that could make this thought come true in real life.					1 2 3 4 5 6 7	
26. When I have this thought, I must get it out of my mind as quickly as possible and keep it out.					1 2 3 4 5 6 7	
27. This thought does not reflect my fantasies.					1 2 3 4 5 6 7	
28. Even though this thought goes against my personality, it doesn't mean anything at all.					1 2 3 4 5 6 7	
29. I would never want this thought to happen in real life.					1 2 3 4 5 6 7	

1 Strongly disagree	2 Disagree mostly	3 Disagree a little	4 Neither disagree or agree	5 Agree a little	6 Agree moderately	7 Strongly agree
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30. I typically do just about anything to get this thought out of my head the moment I become aware of it. 1 2 3 4 5 6 7
31. A person like me should not have thoughts like this. 1 2 3 4 5 6 7
32. The more I have this thought, the more I wonder if part of me wants it to come true. 1 2 3 4 5 6 7
33. This thought takes me completely by surprise. 1 2 3 4 5 6 7
34. This thought makes my stomach turn. 1 2 3 4 5 6 7
35. I am immoral for having this thought. 1 2 3 4 5 6 7
36. This thought is upsetting because I've never done anything like this before and never would want to in the future. 1 2 3 4 5 6 7
37. The more I have this thought, the more I worry that maybe part of me wants it to come true. 1 2 3 4 5 6 7

Thank you very much for your time.

COMMENTS

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