

Ego-syntonic Obsessions

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Abstract

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The supposed synonymy of obsessions and intrusive thoughts is critically examined. It is suggested that there may be distinct differences in the appraisal of classic intrusive thoughts which features aggressive or sexualised content and the appraisal of contamination fears. This is significant for both the current definition of obsessions and to the cognitive model proposed by Salkovskis (1985, 1989). Following a review of the research into the relationship between intrusive thoughts and obsessions, Salkovskis's cognitive-behavioural model of obsessive-compulsive disorder (OCD) (Salkovskis, 1985, 1989) is examined and two key papers, which are often cited to support the view that intrusive thoughts in the normal population are synonymous with obsessive thoughts as experienced by OCD patients, are critically appraised. Evidence from a number of phenomenological studies is also considered as an alternative source of information about the nature of obsessions in the clinical population. The development of a new measure, the Obsessive Thoughts Appraisal Scale is reported. This measure was used with both clinical and non-clinical samples (n = 109). It was found to have adequate psychometric properties. The results of the hypothesis testing indicate that judgements of ego-syntonia are not restricted to some small number of patients suffering from overvalued ideation, but rather ego-syntonic appraisals of some obsessions appears to be widespread but closely related to the individual's degree of obsessionality. Furthermore, obsessions concerning contamination were found to be significantly less ego-dystonic than those that concerned aggressive or sexually intrusive thoughts. Suggestions are made for both clinical practice and future research.

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Chapter 1: Overview

This thesis makes a suggestion for a modification to Salkovskis's (1985) cognitive-behavioural model of obsessive-compulsive disorder (OCD hereafter). To do so involves changing both the way in which cognitive theory has been applied to this particular psychological problem, but also draws in to question the very nature of current definitions of obsessions. To deal with both these issues, this thesis will begin with a review of the history of definitions of obsessions, then will consider the early intrusive thought research, followed by an analysis of Salkovskis's cognitive-behavioural account of OCD in the context of recent research in the area. It then goes on to examine the need for a new measure that can analyse OCD patients' appraisals of their obsessive thoughts. The research that was carried out to devise this new measure is described, followed by a testing of the hypotheses of this thesis with this measure. The conclusion summarises the implications of the results and draws out the clinical significance of the thesis.

Chapter 2. Definitions of obsessions

History of definitions

Esquirol (1838) is credited with having written the first case history of obsessive compulsive disorder and Morel (1866) for introducing the term “obsession”.

Westphal (1878) was the first to offer a comprehensive definition of obsessive disorder, describing obsessions as “thoughts which come to the foreground of consciousness in spite of and contrary to the will of the patient, and which he is unable to suppress although he recognises them as abnormal and not characteristic of himself” (quoted in Osborn, 1998, p. 30). This highlights three key features of obsessions as:

1. Thoughts that intrude into consciousness (intrusiveness)
2. Resisted by individual (resistance)
3. Perceived as abnormal by patient (senselessness)

Rachman and Hodgson (1980) claim that the definition of obsessional neurosis has produced little controversy. Indeed the current Diagnostic and Statistical Manual of Mental Disorders (DSM-IV hereafter, APA, 1993) criteria for obsessive-compulsive disorder still contains the three features cited above, corresponding with criteria A(1), A(3) and B. Yet there has been some dissent; Schneider (1925) defined obsessions as objects of consciousness that are accompanied by subjective compulsion, which are difficult to dismiss and on quiet reflection are regarded as senseless. Here

senselessness is given as a feature which may or may not be present depending on the person's mood state at the time. Likewise Lewis's (1936) seminal paper on obsessional illness, based on a study of more than a hundred cases, stated that "the recognition that the obsession is senseless is not an essential characteristic" (p.325). He went on to claim that a critical appraisal of the obsession is not always present and that the obsessional idea is not always absurd. More recently Walker (1973) claimed that many clearly obsessional patients do not believe their obsessions are senseless and show no internal resistance.

A different approach to the senselessness of obsessions was taken by Capstick and Seldrup (1973) who differentiated what they called "normal" obsessions from "bizarre" obsessions. The former being an exaggeration of a normal activity such as excessive washing, whereas the latter being outside of normal activity (such as tapping the kerb a certain number of times before crossing the road)¹. Their position seems to suggest that obsessions can be either sensible (though excessive) or senseless. A sensible obsession would fit generally with the rest of one's belief system and not go against the laws of nature (for instance having to wash lots for fear of germs), whereas a senseless obsession is one in which the causal link between the obsession and the feared event is not related to the rest of one's belief system (for instance thinking that not tapping the curb before crossing could mean harm will come to one's family).

¹ It should be noted that Capstick and Seldrup (1973) are not clear in the distinction between obsession and compulsions. Typically, behaviours such as washing, and tapping objects would be classified as compulsions.

Black (1974) also argues against the notion that senselessness is a necessary feature of an obsession, and cites as a counter-example fears of contamination, but does not expand on how this example should not be regarded as senseless, though it fits with Capstick and Seldrup's notion of a "normal" obsession.

Beech and Vaughan (1978) identify what they describe as a "psychotic" element present in some obsessive patients, namely that they have a belief in their pathological ideas. This is essentially not believing in the senselessness of obsessions. Beech and Vaughan's position differs to the authors cited previously in that they link this to a particular sub-group of patients with OCD and believe it is associated with poor prognosis.

Definitions from the (DSM-III, -III-R and -IV)

The status of senselessness as a diagnostic indicator has changed within the revisions of the various editions of the *Diagnostic and Statistical Manual of Mental Disorders*. Indeed Riggs and Foa (1993) suggest that the conceptualisation of OCD has undergone considerable change. In DSM-III (APA, 1980), no specific mention is made of senselessness as a necessary criterion for an obsession but it describes obsessions as "thoughts.. that are ego-dystonic". The term ego-dystonic, which is derived from the psychoanalytic literature, is defined by Reber (1985) as meaning "wishes, ..impulses, behaviours, etc. that are unacceptable to the ego; or, perhaps more accurately, unacceptable to the person's ideal conception of self." The notion is

elaborated by Salkovskis (1985) in his cognitive-behavioural analysis of OCD in which he states that “ego-dystonic - that is, the content is experienced as inconsistent with the individual’s belief system, and is perceived as objectively irrational.”. This difference in emphasis in relation to the obsession to one’s conception of self (or ego) and the inconsistency with one’s belief system, reflects the differing concerns of the psychoanalytic and cognitive-behavioural accounts. Of importance is the suggestion of perceived irrationality, for this is closer to the notion of senselessness that has been important in previous definitions. The development of DSM-III-R (APA, 1987) introduced the idea that obsessions are "at least initially experienced as intrusive and senseless". Here senseless is included explicitly, but an exception is allowed that it may be that the person suffering with OCD may go through periods where they find it more difficult to determine the senselessness of their thoughts. This was reflected in the manual by the addition of the label “overvalued ideators” for those patients with OCD who did not recognise their obsessions as senseless. The next edition of the DSM manual saw yet another change to the criteria regarding senselessness. DSM-IV (APA, 1993) criteria for OCD included a specifier attached to the diagnostic criteria for OCD "with poor insight". This stated that even if insight may not be present during current episode of treatment, the diagnosis of OCD could still be made.

Nomenclature in definitions of OCD

The relationship between a number of commonly used terms in this area requires some clarification. Early descriptions of obsessions used the term “senseless” to capture the way in which obsessions can seem unreasonable even to the patient

themselves. But there are a variety of other terms which have been used in its place. Table 1 shows some of these alternative forms. Furthermore, a variety of terms have been used to describe patients with OCD who cannot recognise the senselessness of their obsessions. The most common have been “over-valued ideators” and patients “with poor insight”, though Beech and Vaughan (1978) used the term “the strength of belief in the... pathological idea” to capture this idea.

Table 1. The variety of terms used to describe senselessness of obsessions and their sources.

Description	Source
abnormal, not characteristic of himself	Westaphal (1878)
senseless	Lewis (1936)
bizarre	Capstick and Seldrup (1973)
irrational	Salkovskis (1985)
excessive or unreasonable	DSM-IIIR (APA, 1987)
absurd or nonsensical	Kozak and Foa (1994)

For simplicities sake, the term senselessness will be used in this thesis to cover the general notion of an obsession being regarded as unreasonable, far-fetched or absurd, though specific variations on this idea will be highlighted when relevant.

There are a related set of ideas frequently discussed in the OCD literature which are not so specifically associated with the senselessness of the obsessive thought. For instance, as previously mentioned, the term “ego-dystonic” is

frequently used to describe obsessions. This term has been used to characterises the obsession in relation to the rest of one's belief system and notion of self, and is therefore more than just a description of strength of belief, but also covers the alienness and unwantedness of the thought. DSM-III (APA, 1980) defines ego-dystonia as involuntarily produced thoughts that are senseless. DSM-IV (APA, 1993) defined ego dystonia as "the individual's sense that the content of the obsession is alien, not within his or her own control, and not the kind of thought that he or she would expect to have." Byers, Purdon and Clark (1998) define ego-dystonia as "perceived as uncharacteristic of one's personality" (p360).

Because of the variations in the way that ego-dystonia is defined, particularly within the criteria of DSM-IV (APA, 1993), it would appear to cover a range of different concepts which include:

1. intrusiveness / involuntary / uncontrollable / unexpectedness
2. senseless
3. incongruent with personality / belief system
4. unbelievable or unlikely to happen or improbable.

Much research has been done on this first group of issues in relation to obsessions (for instance England and Dickerson (1988) on intrusiveness, Edwards and Dickerson (1987) and England and Dickerson (1988) on controllability) and Jakes (1996) offers

an excellent summary of the relative importance of each of these facets to definitions of OCD. These aspects will not be discussed in detail here as the focus of this thesis is the issue of whether obsessions are regarded as ego-dystonic in accordance with features 2, 3 and 4 set out above.

It should be noted at this stage that the definition of obsessions used in this dissertation is the liberal one of repetitive and distressing thoughts. Clearly this is only a necessary and not sufficient condition for a thought to be an obsession. Such a liberal definition does not discount worry or other forms of anxious thought. On the other hand it has the benefit of not presuming the ego-dystonic nature of obsessions, but does distinguish them from the kinds of thoughts and behaviours to which the appellation "obsessive" is often attached in common speech, for instance having an "obsession" with trains. This may include repetitive thoughts about trains, but this would not be experienced as distressing.

Differentiating obsessions from compulsions

Before going on to consider the recent work on intrusive thoughts and its relation to clinical obsessions, it is necessary to clarify another conceptual issue. This is the distinction between obsessions and compulsions. Older attempts to differentiate between obsessions and compulsions (such as that in DSM-III-R, APA, 1987) tended to define obsessions as unwanted, intrusive thoughts, whereas compulsions were repetitive, purposeful behaviours. De Silva (1988) developed a more subtle differentiation which took account of the fact that some compulsive rituals are mental

rather than behavioural (such as counting, praying, etc.). He defined compulsions as voluntary or "active" (de Silva, 1988) and obsessions as involuntary and "passive". Jakes (1996) gives an example to illustrate this difference with a "checker". If he thinks he may have left his door unlocked, then this would be regarded as an obsession, whereas the act of checking the door as a result of this thought is the compulsion. Obsessions are always mental, whereas compulsions are usually physical/behavioural acts (except in the case of mental rituals such as counting and praying). This is the definition that will be used in this thesis.

Differentiating OCD from OCPD

Obsessive-compulsive personality disorder (OCPD) is defined as a "pervasive pattern of preoccupation with orderliness, perfectionism and mental and interpersonal control" (DSM-IV, APA, 1993). It is important to note that the diagnosis for obsessive-compulsive personality disorder specifies that the symptoms are experienced as ego-syntonic. This might be seen as a confounding variable in this study.

A number of factors need to be considered in relation to OCPD. The co-occurrence of OCPD with OCD has been found in many studies to be relatively low. For instance Baer, *et al.* (1990) found 14% for compulsive personality disorder with OCD, Steketee (1990) found a 5% co-occurrence, Black, Yates, Noyes, Pfohl, and Kelley (1989) found 0%, and Joffe, Swinson, and Regan (1988) found 4%. Rosen and Tallis (1995) report that the existence of OCPD as a distinct entity is controversial.

This controversy was not minimised by their results on a non-clinical student sample showing rates of personality disorder amongst the group of 66.3%. Given the extraordinary rate of over-diagnosis of personality disorders with measures such as the Personality Diagnostic Questionnaire (PDQ-R, Hylar and Rieder, 1987), conclusions about the rate of concordance between OCD and OCPD need to be highly tentative. Secondly, one of the difficulties of differentiating between OCD and OCPD is that, as Summerfeldt, Huta, and Swinson (1998) point out, the content of symptoms and personality traits often overlaps. Thirdly, the symptoms of OCPD are not associated with distress, which in OCD would manifest as anxiety. This current study includes a measure of anxiety as well as measures of OCD symptomatology which would provide some degree of assurance that patients with OCPD have not been included. Finally, in a study by Baer and Jenike (1992) ten patients diagnosed with both OCD and personality disorders were given both medication and behaviour therapy. Following treatment, not only had the symptoms of OCD been relieved, on re-testing nine out of the ten no longer had a personality disorder.

While the relationship between OCD and OCPD remains poorly defined, and the instruments to measure personality disorders continue to produce exceptionally large numbers of false positives, it seemed untenable to include a consideration of OCPD as a confounding variable, but it is acknowledged that future studies highlighting this issue would be of value.

Chapter 3: Intrusive thought theory

Early work on intrusive thoughts

Rachman (1981) identified a type of thinking which he described as “unpleasant intrusive cognitions” that was common in OCD. Furthermore research suggested that these intrusions might be a normal part of human experience (Rachman and de Silva, 1978; Salkovskis and Harrison, 1984) rather than a uniquely pathological phenomenon.

Rachman and de Silva (1978) and Salkovskis and Harrison (1984) are two papers which are very commonly cited as showing that intrusive thoughts in the non-clinical population are similar in content and form to obsessions as experienced by individuals with OCD (e.g. Amir, Cashman, and Foa, 1997). It is these two papers therefore, which are used to show that obsessions and intrusive thoughts are the same phenomenon. Given the status of these studies it is worth reviewing their content and methodology.

Rachman and de Silva, (1978) Abnormal and normal obsessions. Rachman and de Silva set out the twin aims of their study as being to a) test the hypothesis that all people experience obsessions and b) examine what the similarities and differences might be between the clinical and “normal” obsessions.

The non-clinical sample was of 124 normal people (mostly students). They were given a questionnaire that asked about intrusive, unacceptable thoughts or impulses.

Roughly 80% of the respondents had the kinds of thought asked for on the questionnaire. Out of the 20% who responded negatively, 4% said they experienced the types of intrusion mentioned but did not find these thoughts unacceptable.

The clinical sample in this study consisted of eight patients who were interviewed by one of the authors, and from whom were elicited twenty three different obsessions. Similarity of content between clinical obsessions and non-clinical intrusive thoughts was tested, by getting clinicians to classify them according to whether they thought they came from patients or non-patients. Though Rachman and de Silva (1978) claimed that the clinicians were not able to do this very well, four out of the six managed scores significantly better than chance. It is not clear that this should be taken as proof that the contents of normal and abnormal obsessions are indistinguishable, and Rachman and de Silva are careful to qualify their statements about the degree of similarity as only “fairly similar in content” (p244).

Rachman and de Silva (1978) collected phenomenological data on how the clinical sample appraised their current obsession. Only one out of the eight thought that the obsession was senseless. All but one felt the obsession had meaning, but six out of the eight said that the obsession was alien to their normal self. Similarly, they collected phenomenological data from forty of their non-clinical sample as well. All forty of them said that their intrusive thought was not senseless and had meaning, while those believing the intrusive thought was alien to their self made up less than half (19/40).

The very small clinical sample in the study by Rachman and de Silva (1978) renders any conclusions about the similarities and differences between normal intrusive thoughts and clinical obsessions highly speculative. It seems clear that neither group found these thoughts senseless or meaningless. This is in keeping with the reservations about senselessness as a criteria expressed by a number of authors cited in the introduction to this thesis, but goes against the thrust of DSM-III-R (APA, 1987) and DSM-IV (APA, 1993) definitions of obsessions which have emphasised senselessness as the norm.

Salkovskis and Harrison, (1984) Abnormal and normal obsessions - A replication.

It is important to note that, despite the title, this replication study by Salkovskis and Harrison, was a replication of the questionnaire used by Rachman and de Silva, but on a purely non-clinical sample, and therefore it tells us nothing about the relationship between abnormal clinical obsessions and normal intrusive thoughts. As they themselves state in the introduction, “(this) study ... sets out to replicate and extend their (Rachman and de Silva) findings as regards the incidence and characteristics of “normal” obsessions...”. They found a higher rate of positive responses than Rachman and de Silva (1978) at 88.2%. No data is cited as to how their sample appraised these intrusions in terms of senselessness, ego-dystonicity, or meaning.

Since these two key papers were published they have often been misquoted as substantial support for the view that obsessions and intrusive thoughts are synonymous. Salkovskis, Forrester and Richards (1998) stated that:

“Almost all non-clinical subjects experience such intrusions which are indistinguishable in terms of their initial content from obsessional thoughts (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). Furthermore, most patients regard their obsessional thoughts as senseless or extremely unlikely” (p54).

Not only were obsessions only “fairly similar” in content, both patients and non-patients almost unanimously did not regard their thoughts as senseless.

The relationship between unwanted intrusive thoughts and obsessions has become over-simplified in the literature. Many papers have been cited as having replicated the finding that non-clinical intrusive thoughts are similar in form and content to clinical obsessions, such as Parkinson and Rachman (1981), Salkovskis and Harrison (1984), Clark and de Silva (1985), Edwards and Dickerson (1987), England and Dickerson (1988), Niler and Beck (1989), Freeston, Ladouceur, Thibodeau and Gagnon (1991) and Purdon and Clark (1993) and yet none of these studies utilised a clinical sample.

The fact that non-clinical subjects experience intrusive thoughts is in no doubt. Many studies have replicated this robust finding. The issue in question is how similar these intrusive thoughts are to actual clinical obsessions and the degree to which they are appraised in the same way as being as Salkovskis put it "senseless" and "implausible" (Salkovskis, 1985). Only one of the studies so far mentioned (Rachman and de Silva, 1978) attempted to gather data on clinical obsessions for comparison, and as has been mentioned, their clinical sample was very small. Most have relied on the supposedly self-evident nature of the content and form of clinical obsessions to compare with intrusive thoughts in non-clinical subjects.

The two issues outlined so far are that a) there is disagreement as to whether obsessions are necessarily regarded as senseless and unlikely by the patient and b) intrusive thought studies comparing clinical and non-clinical intrusions did not find an appraisal of senselessness to be widespread. The potential significance of these two findings for the cognitive-behavioral model of OCD will become clear once Salkovskis's model of OCD has been examined.

Chapter 4: Cognitive-behavioural accounts of OCD

A number of different models have been offered to explain obsessive-compulsive disorder. Jakes (1996) offers a comprehensive review of the strengths and weaknesses of psychodynamic, behavioural/learning theories, the cognitive-structural and biological approaches to this problem. The recent developments in neuropsychological perspectives on OCD is thoroughly examined by Tallis (1999) and will not be considered here. The focus for this thesis is on cognitive-behavioural models of OCD.

McFall and Wollersheim

McFall and Wollersheim (1979) utilised the work of Carr (1974) to develop a cognitive-behavioural account of OCD. Carr had suggested that at the heart of the obsessive-compulsive neurosis is an unrealistic threat appraisal. This appraisal is an overestimate of the probability that the event will happen and an overestimate of the consequences of the unfavourable event. McFall and Wollersheim (1979) draw out two issues from Carr's development of the cognitive model of OCD that they felt needed further elaboration; a) the factors that influence the overestimation of threat, and b) the cognitive factors which influence coping in the obsessive-compulsive individual, which they labelled respectively as primary and secondary appraisal processes. They suggest that the former is composed of a number of assumptions held by obsessive-compulsive patients which cause them to overestimate the threat. They list these assumptions as follows: a) one should be perfect, b) failure requires punishment or condemnation, c) one has the power to initiate or prevent disastrous

outcomes by rituals or rumination, d) some thoughts are unacceptable - could lead to catastrophe and one should be punished for thinking them. They predict that these assumptions will influence the primary appraisal process, but that the degree to which these beliefs are held, and the degree to which the person is consciously aware of them will vary from one individual to another.

A theme which is central to McFall and Wollersheim's formulation, but which also runs through most of the cognitive accounts of OCD is that, "the individual resorts to coping efforts represented by rituals and ruminations that are in no rational way related to the removal of threat" (McFall and Wollersheim, 1979, p336). This insistence on the irrationality of the symptoms of OCD has been a cardinal principle of the cognitive account.

Salkovskis's cognitive-behavioural model of OCD

Salkovskis (1985) was critical of the attempts made by Carr (1974) and McFall and Wollersheim (1979) to develop a cognitive-behavioural model of OCD not least because of McFall and Wollersheim's reliance on psychodynamic concepts.

To develop a more comprehensive cognitive-behavioural model of OCD which would fit with the existing cognitive model as outlined by Beck (1976) and would be able to differentiate the unrealistic appraisals of threat made by OCD patients from those of other patient groups, Salkovskis concentrated on Beck's suggestion that it is the idea or perception of an event, not the event itself, which determines a person's

emotional response. To this notion, the individual's subjective appraisal of events, he added the idea of Rachman and de Silva (1978) of the near universal experience of intrusive thoughts.

Cognitive therapy as outlined by Beck (1976) gave a central role to negative automatic thoughts (NATs) as a source of distress. It was important therefore that Salkovskis could differentiate between obsessions and negative automatic thoughts. To do so, Salkovskis emphasises the ego-dystonic nature of obsessional thoughts and their perceived irrationality, compared with the ego-syntonic and rational quality of NATs (Salkovskis, 1985).

Salkovskis claims that obsessions are “by definition, ego dystonic” p578 (Salkovskis, 1985), by which he meant that they are inconsistent with the individual’s belief system and perceived as objectively irrational. Obsessions are described as incongruent with one's belief system in contrast to NATs which Salkovskis claims are an expression of one's belief system. He compares the literature on these two different cognitive phenomena and finds that obsessions can be differentiated from NATs in that they are a) intrusive b) very accessible c) irrational and d) inconsistent with one's belief system. On the other hand he lists the features of NATs as a) running parallel with one's stream of consciousness, b) difficult to access c) rational and d) consistent with one's belief system.

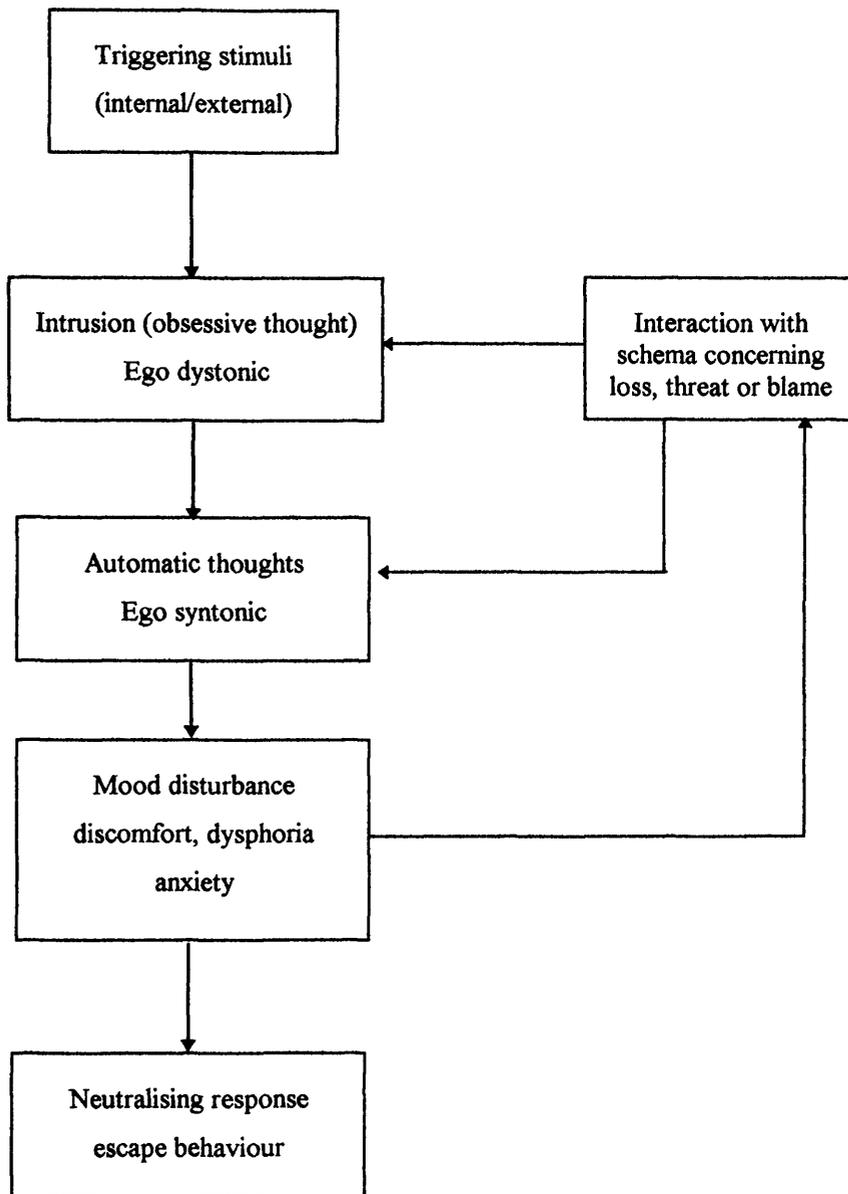
This allows obsessions to feature as normal cognitive events, to which the NATs form the abnormal response. Salkovskis argues that obsessive thoughts function as a stimulus which can provoke NATs in certain people. He suggests that intrusive thoughts occur frequently in the normal population but only become a source of mood disturbance when they result in NATs, as is the case in patients with obsessive-compulsive disorder.

Salkovskis, Richards and Forrester (1995) elaborates on Salkovskis's model by describing their approach as parallel to the cognitive approach to panic outlined by Clark (1986). Panic attacks are said to occur because of a misinterpretation of normal bodily sensations which most people experience but which only panic attack prone people interpret as catastrophic. Likewise, Salkovskis *et al.* (1995) claim that virtually everyone experiences intrusive thoughts and it is only those people who interpret them as having significance that will experience distress and anxiety.

Salkovskis, Forrester, and Richards (1998) expanded on the notion of interpretation or appraisal of intrusive thoughts by specifying the kinds of appraisal that are likely to lead to NATs and therefore the development and maintenance of clinical obsessions. They claim that if intrusive thoughts are interpreted as indicating that one is responsible for harm or harm prevention then the result is likely to be an obsession.

The relationship between intrusive thoughts, NATs and mood disturbance is illustrated in Figure 1. which is a simplified form of the diagrammatic representation of the cognitive-behavioural model that Salkovskis outlined in Salkovskis (1985).

Figure 1. Simplified representation of Salkovskis's model of OCD (1985)



Salkovskis, *et al.* (1998) argue that despite regarding an intrusive thought as senseless, two cognitive processes may result in the obsessive-compulsive individual still being worried that the thought might come true. The person makes a judgement of perceived probability, but this combines with the person's assessment of the meaning of the event. This can lead to a person believing that an outcome is

extremely unlikely but still show great fear because of what it would mean if it did happen.

Salkovskis *et al.* (1998) outline the role of assumptions in the generation of particular negative appraisals of intrusive thoughts. These include assumptions such as "Having a thought about an action is like performing the action" (which has since become labelled as Thought-Action Fusion (Rachman, 1998, Rachman and Shafran, 1999) where "like" is deemed to mean morally equivalent) and "Responsibility is not reduced by other factors such as something being improbable". This last assumption is closely related to a central feature of Salkovskis's approach, the notion of inflated responsibility (Salkovskis, 1985).

Many other researchers have contributed substantially to the cognitive-behavioural model of OCD over the past two decades. Rachman (1998) has elaborated on the importance of catastrophic misinterpretation of intrusive thoughts, Wells (1997) metacognitive model proposes that obsessive thoughts are experienced as threatening when they trigger metacognitive beliefs about the meaning of such thoughts (for instance "thinking this means I am going crazy") and Clark and Purdon (1993, 1995) made some speculative contributions to the cognitive theory of obsessions, emphasising the role of depression in reducing the ability to control intrusive thoughts, the role of schema concerning the need to control one's own thoughts, and a de-emphasising of the role of neutralisation in the formation of obsessions. All three

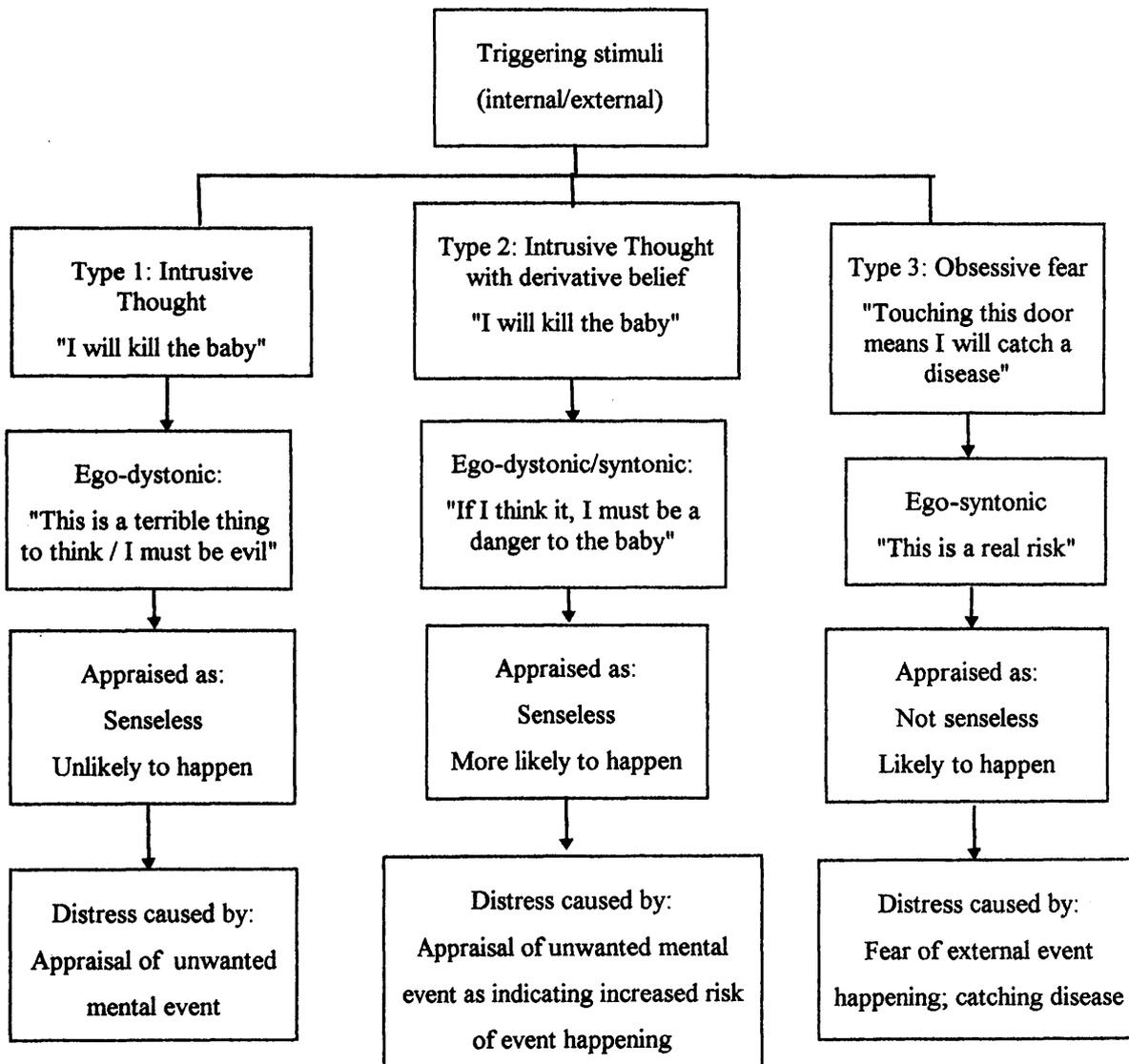
of these approaches are, on the whole, compatible with Salkovskis's model and none of them diverges from the view that all obsessions are ego-dystonic.

Chapter 5. Conceptual critique of the current model of obsessive thoughts

Salkovskis's (1985, 1989) model has been of great value in focusing attention on the degree to which it is the appraisal of obsessions that causes much of the distress in OCD rather than the obsessions themselves, warning against bland reassurances and arguing about probabilities with patients, which can arise from treating intrusions as irrational beliefs that need to be challenged.

To assess the strengths and weaknesses of this account it is necessary to differentiate between three different types of obsession, which are illustrated in figure 2.

Figure 2. Salkovskis's model (Type 1 and Type 2) with the postulated third type of obsession concerning ego-syntonic contamination fears.



Type 1 (metacognitive)

As an example of the classic obsessive thought described by Salkovskis one can take an example of an intrusive thought used by Salkovskis *et al.* (1995). The thought they use is "I might ... kill my baby". This thought is highly ego-dystonic, and is likely to

be described as irrational or senseless when thought by an otherwise loving and devoted parent. The kind of ideation or appraisal that one might have in response to such an intrusive thought is spelt out in an earlier paper Salkovskis (1985) such as "having these thoughts means I am evil". According to classic cognitive theory, it is the appraisal of events, not the events themselves that causes distress, hence in this situation it is the appraisal "thinking this means I am evil" that causes the distress, not the (mental) event itself, thinking "I might kill my baby". Salkovskis would argue that the thought itself would be a common enough intrusive thought in the general population but only gives rise to difficulties when the person appraises it as significant.

With this first kind of appraisal it is the occurrence of the thought that is of relevance rather than its contents. The person is appraising their own cognitive process negatively. This evaluation of one's own thinking can be described as metacognitive, though this is not the way in which Salkovskis has described it. Wells (1997) has characterised the appraisals of thought in Salkovskis's model as an emergent property of metacognitive processing, and for the present, this kind of ego-dystonic obsession that is appraised in terms of its occurrence as distressing will be labelled metacognitive. Furthermore it is the internal cognitive process that is causing the distress, that is, what is being thought about, not the external events in the world. Even if the risk of the thought actually happening is judged by the parent to be very small, they will still be distressed to be thinking such thoughts.

Four key features of this type of obsession and appraisal are as follows:

1. The obsession is fully ego-dystonic (judged to be senseless and unlikely to happen)
2. The obsession is appraised in terms of its occurrence (this is a bad thing to be thinking)
3. The appraisal is metacognitive (it is about the significance of these kinds of mental event)
4. The distress caused concerns internal processes (thinking bad thoughts)

The importance of the appraisal being limited to the occurrence of the thought needs to be made explicit. If it is only the occurrence that is distressing, then the claim that the intrusive thought is regarded as senseless and unlikely to happen, that is ego-dystonic, is coherent. This fits with Salkovskis's claim that the experience of obsessive thoughts is analogous to physical sensations in panic disorder where it is the catastrophic mis-interpretation that causes the distress, not the physical sensations or thoughts themselves. To return to Salkovskis's model, figure 2. illustrates type 1 intrusive thoughts on the left as an internal stimulus in the obsessional process.

Type 2 (derivative belief in likelihood)

A second type of obsessive thought can come about because of the appraisal process of an intrusion. Taking the previous example, though the parent might find this thought totally irrational, they may appraise its occurrence as significant and

indicative that they are in some way a danger to their child. For instance the parent could think that having the thought indicates that there is a risk that they might succumb to the thought. This is exactly what Salkovskis *et al.* (1995) go on to suggest. But if they believe this means there is a risk to the baby, they must also believe that the thought indicates some increased likelihood of the event happening (however unwanted). To consider each of the four dimensions again:

1. The obsession is still ego-dystonic (judged to be senseless, but now thought to be a possible risk, if still unlikely to happen)
2. The obsession is appraised in terms of its occurrence (this is a bad thing to think), but also in terms of its content (this thought might happen).
3. The appraisal is metacognitive (it is about the significance of these kinds of mental event, but now in two senses; this is both a bad thing to think and increases the likelihood of it happening)
4. The distress caused concerns internal processes (thinking bad thoughts) but also external events (the fear that one may be overcome by the irrational urge and carry it out)

Type 3 (ego-syntonic obsessions)

The third type of obsession is best characterised by thoughts concerning contamination. Sometimes in contamination obsessions it is the fear that some germs may actually pose a risk to the self or others that is distressing, not the occurrence of a "senseless" thought. If the thought could be dismissed as merely senseless, it would

lose its potency, for unlike the aggressive or sexual intrusive thought, thoughts about contamination are unlikely to be appraised as evil or mad. Obsessive thoughts about contamination are acted upon (in terms of their specific content), resulting in quite logically derived (though excessive) behaviours such as washing and cleaning. These kinds of thought are not morally reprehensible, unlike the "I will kill the baby" intrusion and so do not in themselves necessarily relate to feelings of guilt and responsibility. It is not the occurrence of these thoughts that is distressing in itself, but rather the fear that the thought is an accurate portrayal of a dangerous and risky situation in the external world.

In terms of the four dimensions we have considered, the ego-syntonic contamination obsessions is judged thus:

1. The obsession is ego-syntonic (judged to be sensible and likely to happen)
2. The obsession is appraised in terms of its content (I don't want to catch a disease, I better wash some more).
3. The appraisal is not metacognitive (it is not about the thinking but the risk)
4. The distress caused concerns external processes (the risk of catching a fatal disease)

Though it seems likely that Salkovskis's model of OCD (Salkovskis, 1985, 1989) is right for classic ego-dystonic intrusive thoughts concerning aggressive, sexual or impulse control related content, it might be that for obsessions concerning themes of

disease or contamination that the underlying difficulty is the patient's belief in the obsessive thought. That is, they regard the feared obsession as neither senseless or unlikely. This might be described as "unrealistic threat appraisal" (Carr, 1974). Some support for this view comes from the literature that suggests that obsessional patients are more cautious than other groups (Steiner, 1972; Steketee and Frost, 1994).

A note about obsessive-compulsive spectrum disorders

One of the arguments for regarding all obsessive thoughts within OCD as ego-dystonic was to distinguish them from other forms of so called obsessive and compulsive behaviours such as compulsive gambling and shopping. Recent work on OCD spectrum disorders (Crino, 1999) has rightly highlighted the fact that though these disorders may have compulsive components, they are essentially pleasurable or gratifying activities and this makes them quite different to obsessions in OCD which are both distressing and anxiety provoking. The definition of ego-syntonic obsessions given earlier is intended to identify a type of obsessive thought which is distressing and anxiety provoking. It is in no sense pleasurable, and so is still clearly recognisable and distinguishable from the kinds of phenomena seen in obsessive-compulsive spectrum disorders.

Chapter 6. Empirical evidence for ego-syntonic obsessions

Consideration has been given so far to the conceptual reasons why some obsessions may be appraised as ego-syntonic by some obsessive patients. To evaluate this argument further it is worth considering the evidence available from the current literature.

One source of data on the characteristics of obsessions in clinical populations is the phenomenological studies that have been carried out into OCD symptomatology. A number of studies have been conducted that investigate the symptoms of OCD, often through the use of semi-structured interviews. Many of these studies found that patients with OCD varied widely in the degree to which they regarded their obsessions as senselessness or ego-dystonic and the degree to which they resisted their compulsions.

In a study by Lelliott, Noshirvani, Basoglu, Marks and Monteiro (1988) they found that a third of their participants (n=49, clinical sample) believed that their obsessive beliefs were sensible. Their study clearly demonstrated a range of awareness of the senselessness or otherwise of their obsessive beliefs, and a range of resistance to the compulsive urges (some patients freely gave in to them and performed the ritual). Furthermore, they asked whether the consequence of the obsession was likely to happen if the patient did not ritualise to prevent it. Of the 49 patients, 45% reported thinking it was likely to happen, 25% were uncertain and 30% thought it unlikely.

Lelliott *et al.* (1988) conclude that the "results support Lewis' (1936) view that "recognition that the obsession is senseless is not an essential characteristic" of an obsession and that "critical appraisal of the obsession, and recognition that it is absurd... is not always present"" (p701). This study was conducted by interview and it did not report how the obsession was chosen by the patient, nor was the content of the obsessions reported. Despite these shortcomings, the results clearly support the suggestion of this thesis that there may be some obsessions that are not experienced as ego-dystonic by obsessive-compulsive patients.

Rasmussen and Eisen (1989) carried out a study to examine the phenomenological features of obsessive-compulsive disorder. Their findings suggested that obsessive thoughts that concern symmetry, order or exactness are associated with poor prognosis, a "near-delusional" quality and a difficulty in expressing the particular intrusive thoughts associated with them.

A large scale (n=861) non-clinical study carried out by Apter, *et al.* (1996) on 16 and 17 years olds attempted to examine the distribution and severity of obsessions and compulsions in the adolescent population. Only 20% reported that they usually or always regarded their obsessions as senseless, with "never" and "occasionally" senseless accounting for roughly 40% each.

Insel and Akiskal (1986) have also written about the varying degrees of insight that patients may have into their obsessive-compulsive difficulties, from full insight to

delusions that the obsessive thoughts are true. They suggest that some aspects of obsessive-compulsive disorder have been overlooked in the traditional view of the disorder as neurotic in nature. They also noted that even when patients recognised the absurdity of an obsession, they were often less than certain about the unlikelihood of the dire consequence happening.

The studies by Insel and Akiskal (1986) and Lelliott, *et al.* (1988) led Foa and Kozak (1995) to examine the conventional assumption that OCD patients always have insight. They used the Fixity of Beliefs Scale with a large sample of OCD patients and found a spread of insight across the group; for instance in regard to “belief in consequences” of obsessions they were distributed as follows: 13% certain consequences would not occur, 27% mostly certain, 30% uncertain, 26% mostly certain they would occur and 4% were completely certain. This study was carried out to ascertain modifications that might need to be made to the criteria for OCD for the publication of DSM-IV (APA, 1993). Their conclusion was that a broad range of insight occurred amongst patients and that therefore the issue of insight needed to be de-emphasised in DSM-IV (APA, 1993). This led to the publication of DSM-IV (APA, 1993) with a specifier attached to the diagnostic criteria for OCD "with poor insight". This stated that even if insight may not be present during the current episode of treatment, the diagnosis of OCD could still be made.

Chapter 7. Hypotheses of thesis

Hypotheses

Evidence from the phenomenological research contradicts the widely accepted view that patients regard all their obsessive thoughts as ego-dystonic. In the first instance it is important to establishing whether this result has been replicated. Therefore the most general hypothesis of this thesis is that obsessive thoughts in general are not universally regarded as ego-dystonic regardless of the person's degree of OCD symptomatology/status. Three aspects of ego-dystonia will be measured for obsessions; senselessness, likelihood to happen and the degree to which thinking the obsessive thought keeps the person safe. This third feature is a reverse of what would be predicted by current definitions of obsessions and is an attempt to capture the notion of incompatibility with one's belief system. It is hypothesised that if the same question had been asked as a negative statement e.g. "Is this thought dangerous?" this might only tap anxiety about the obsession and not necessarily whether or not the thought fitted with one's belief system. By asking it in the positive form "Does thinking this obsessive thought keep you safe?" it unambiguously taps the attitude taken to the thought (as opposed to the possible emotional reaction to the thought being true).

The general nature of the hypotheses of the thesis will be set out below, but more detailed, operationalised hypotheses will be described at the end of chapter 8, following the reporting of the development of a new measure for this project.

To operationalise this initial hypothesis it was decided to define "universally regarded as ego-dystonic" as to meaning that 95% of the obsessive items would have a mean rated as ego-dystonic by the sample; that is a mean rating as senseless, unlikely to happen and not keeping the person safe.

The second set of hypotheses set out to test how ratings of ego-dystonia are influenced by the participants symptomatological status. This thesis has suggested that obsessive-compulsive patients will have lower senseless ratings, higher likelihood ratings and the higher safety ratings than non-patients.

The third set of hypotheses sets out to test how ratings of ego-dystonia are influenced by the type of obsessive thought. It will be recalled that the differentiation between Type 1 (classic intrusive thoughts) and Type 3 (contamination obsessions) was made in chapter 5. It was suggested that Type 1 obsessions will be experienced as more ego-dystonic than Type 3 obsessions, therefore one would predict higher scores on senselessness, lower scores on likelihood to happen and lower scores on safety for Type 1 over Type 3 obsessions.

The fourth group of hypotheses predicts a direct relationship between the degree to which participants experience obsessive-compulsive disorder and the degree to which they regard obsessive thoughts as senseless, likely to happen, and keeping one safe. The higher the participants degree of OCD symptomatology the less senseless they

will perceive obsessive thoughts, the more likely to happen and the more likely they are to be judged to keep them safe.

Finally the division of items into two groups; Type1 intrusive thoughts and Type 3 obsessions concerning contamination, is based on *a priori* examination of the content of the items. One would expect that a similar structure would be found within the scale through factor analysis.

Chapter 8: Development of a new measure

Overview of methodology

To be able to test the experimental hypotheses set out in chapter 7 required the development of a new measure. In all, two studies were carried out. The first was to develop a valid measure of the appraisal of a wide ranging list of obsessive thoughts. The second study established the validity of this measure on a sample drawn from both clinical and non-clinical sources and also tested the central hypotheses of the thesis on this sample. This chapter will describe the development of the new measure and end with a detailed list of operationalised hypotheses related specifically to this measure.

Review of existing measures. The appraisal of obsessions or intrusive thoughts has been a feature of a number of different studies. Purdon and Clark (1993) noted that intrusive thought measures had tended to correlate more highly with measures of anxiety and depression than with measures of obsessive symptomatology. To tackle this problem they developed a measure, the Obsessional Intrusions Inventory (OII), that focused more on what they regarded as obsessive-like intrusions such as those concerning aggressive, sexual and disease-related cognitions. Part 1 of the measure featured item endorsement (i.e. how frequently the participant had the intrusion). Part 2 focused on appraisal dimensions of the intrusion. This included the dimensions of unacceptability and belief that the intrusive thought could happen in real life, but these dimensions were only applied to the participant's most upsetting intrusion.

Minor changes were made to the scaling of the OII for the development of the revised form (Revised Obsessional Intrusions Inventory, ROII) in Purdon and Clark (1994).

The strength of this measure is in the specificity of the items to obsessive phenomena and the lack of overlap with negative automatic thoughts. But the potential drawback of using this measure would have been that it only appraises a person's most distressing intrusion, not the range of intrusions they may experience, and it is not clear how this selectivity might skew the findings, as it may not be representative of the majority of obsessional thoughts that a person experiences.

A second measure used in a recent study of over-valued ideation is the Overvalued Ideas Scale (OVIS) (Neziroglu, McKay Yaryura-Tobias, Stevens and Todaro, 1999). This measure has particular strength in that it covers a wide range of appraisal factors (e.g. strength of belief, reasonableness of belief, view of others holding a different belief etc.), but unfortunately it does not contain any range of obsessions. The administrator simply asks the participant for the main belief, that is associated with the greatest distress or impairment. As with the ROII this only taps a small sub-set of obsessions which may not be representative. A further difficulty with this measure is that it lacked discriminate validity with self-report measures of depression and anxiety.

Need for a new measure. To examine the way in which people with OCD appraise various obsessions required the development of a new measure. This would allow a

full range of obsessions to be appraised, so that variation in appraisal of particular sub-types of obsession would become apparent.

Criteria for new measure. The two criteria for the development of this measure was that it should cover a wide range of obsessive thought types and include dimensions of appraisal that could be used to differentiate judgements of ego-dystonia.

One of the most widely used measures of obsessionality within the literature which focuses on OCD sub-types is the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) (Leckman, *et al.* 1997; Calamari, Wiegartz and Janeck, 1999; Mataix-Cols, Rauch, Manzo, Jenike, and Baer, 1999). It has been consistently shown to have good sub-scale structure and is widely acknowledged as one of the most reliable measures of OCD symptomatology (Taylor, 1995). It is comprised of a severity scale used by trained interviewers and an additional symptom checklist, which details a comprehensive range of obsessive and compulsive symptoms. It is the checklist that has been used in both factor analytic (Leckman, *et al.*, 1997) and cluster analytic (Calamari, Wiegartz and Janeck, 1999) studies of OCD sub-typologies. Unfortunately the checklist is not framed purely in terms of obsessive thoughts, but rather suggests general categories of obsessive thoughts such as "Fear something terrible will happen (e.g. fire, burglary)" (Rasmussen & Eisen, 1989). To enable specific examples of obsessive thoughts to be presented to participants, items from other measures which

represented specific instances of the categories from the Y-BOCS checklist needed to be compiled.

An alternative strategy would have been to devise a new pool of items for the development of this measure but this was decided against for two reasons. It was felt that many scales measuring obsessive thoughts have already been constructed, some with good psychometric properties. The aim of this study was to explore participants' appraisals of these thoughts, therefore it would be both repetitious and, for the time-scale of this project, overly ambitious, to start devising a scale from scratch. The selection of items from pre-existing scales, most of which had established reliability and validity ensured that the items themselves were of a fairly robust nature.

Method

Item generation. Items were selected from a number of scales: Yale-Brown Obsessive-Compulsive Scale checklist (Goodman, *et al.* 1989), Revised Obsessional Intrusions Inventory (Purdon and Clark, 1994), Padua Inventory (Sanavio, 1988) and the Obsessive Compulsive Thoughts Checklist (Bouvard *et al.* 1997) to reflect the obsession categories in the Yale-Brown Obsessive Compulsive Symptom checklist. These four scales all have good psychometric properties. A further small number of items were derived from a number of less well established measures such as the Hamburger Obsession Compulsion Inventory (Zaworka and Hand, 1980), National Institute of Mental Health Global Obsessive Compulsive Scale (Goodman and Price,

1992), Checklist of Common OCD Symptoms (Schwartz, 1996) and the Obsessive-Compulsive Behavioural Checklist (Powell, 1992).

Yale-Brown Obsessive-Compulsive Scale checklist (Y-BOCS) (Goodman, *et al.* 1989). This measure is composed both of a severity scale and a symptom checklist, which are designed to be used in a interview format. The Y-BOCS is used here primarily to provide categorical structure to the new scale though a small number of the statements from the checklist were used in the item pool. Both the research and clinical validity and reliability of the Y-BOCS have been demonstrated in a number of studies (Goodman, *et al.* 1989, Kim, Dysken and Kuskowski, 1990).

Revised Obsessional Intrusions Inventory (ROII) Purdon and Clark (1994). This measure designed by Purdon and Clark (1994) is a 52 items self-report questionnaire containing statements of unacceptable thoughts concerning aggression, sex, dirt and contamination. Purdon has highlighted that the range of intrusions is not broad enough (Purdon, 1999; personal communication), but it has the advantage of including many examples of items from these four categories. The validity of the inventory as a measure of obsessive thoughts rather than worry was demonstrated by the fact that it was found not to correlate with the Penn State Worry Questionnaire (Purdon and Clark, 1994)

Padua Inventory (PI) (Sanavio, 1988). The Padua Inventory is 60 items self-report questionnaire, designed to focus on obsessional symptoms rather than traits.

Participants are asked to rate the degree of disturbance the thoughts cause them on a 0-4 scale. The measure has good discriminative validity between obsessive-compulsive patients and other neurotic patients with the exception of seven items. These items were excluded from the current item pool.

Obsessive Compulsive Thoughts Checklist (OCTC) (Bouvard, Mollard, Cottraux and Guerin, 1989). The Obsessive Compulsive Thoughts Checklist is a 28 item self-report questionnaire designed as a measure of the thoughts commonly experienced by obsessive-compulsive patients. It was shown to have good internal consistency (Bouvard, *et al.*, 1997), and convergent validity with the Y-BOCS.

Hamburger Obsession Compulsion Inventory. (Zaworka and Hand, 1980). This is a 27 item self-report measure of obsessive-compulsive symptoms.

National Institute of Mental Health, Global Obsessive Compulsive Scale (GOCS). Goodman and Price (1992). This is a 20 item self-report screening test using yes/no responses in relation to a range of obsessive-compulsive symptoms.

Checklist of common OCD symptoms. (Schwartz, 1996) This is a 47 item self-report measure covering a wide range of OCD symptoms. Items are grouped into categories (e.g. "Obsessions about Dirt and Contamination").

Obsessive-compulsive Behavioural Checklist. (Powell, 1992). This self-report OCD checklist is from the Mental Health Handbook (Powell, 1992) and consists of two parts, 18 items posed as obsessive thoughts and 8 items posed as behaviours. Only items from the thoughts section were included in the item pool.

Procedure

To establish the content validity of the items used, and to provide a structured methodology in which to select individual representative items, a questionnaire was devised to be given to clinicians. This method is similar to that utilised by Purdon and Clark (1993) in the development of the Obsessive Intrusions Inventory. 63 items from the various scales representing the 24 categories outlined in the Y-BOCS obsessions checklist were composed in a list. This questionnaire was given to 5 experienced clinicians to rate. See Appendix A for Clinicians Questionnaire. They were asked to assess each item for how common they felt the thought would be for someone with obsessive-compulsive disorder. The questionnaire allowed them to score each item on a 1 - 5 scale with anchors (rare for 1, common for 5) at each end of the scale.

Participants

The participants (n=5) were all experienced professionals who had experience of working with people with obsessive-compulsive disorder. They included a consultant psychiatrist, two community psychiatric nurses, one family therapist and a clinical psychologist. The gender ratio was 2:3 female to male. The age range was 33 - 58 yr. All had over 6 years post qualifying experience.

Results

Below is a table that presents the 63 items that were shown to the clinical raters, both with the source questionnaire of the items, the mean and standard deviation for raters scores and whether or not the item was included in the final questionnaire.

Table 2. Initial pool of items with origin, mean clinician's rating, standard deviations and whether or not item was included in final list.

Y-BOCS category	Item	Origin	<u>M</u> (SD)	Inclusion
Fear might harm others	Pushing a stranger in front of a train, subway or car	ROII	1.2 (0.45)	
	Hurting defenceless children or animals	PI	2.4 (0.89)	
	I might drive into pedestrians or animals	ROII	2.4 (1.14)	✓
	Kicking, pushing or otherwise hurting complete strangers	ROII	1.6 (1.34)	
Fear might harm self	I might jump in front of a train, subway, or car	ROII	1.8 (0.84)	✓
	I think about harming myself	Y-BOCS	1.4 (0.55)	
	When I see a sharp object (knife, razor, scissors, etc.) I think of slitting my wrist or throat	ROII	1.4 (0.55)	
Violent or horrific images	Images of death or horrible events	Y-BOCS	4.0 (1.22)	✓
Fear of blurting out obscenities or insults	Saying something rude to or insulting a stranger	ROII	4.0 (1.22)	✓
	Blurting out obscenities or insults	ROII	3.0 (0.71)	
Fear of doing something embarrassing	That the fly of my pants is unzipped or that my blouse is unbuttoned	ROII	1.8 (0.84)	
	Having sex in a public place	ROII	1.0 (0.00)	
	People I come in contact with being naked	ROII	1.0 (0.00)	

	Authority figures (vicar, boss, bank manager) being naked	ROII	1.0 (0.00)	
	Accidentally belching or "breaking wind" loudly in public	ROII	1.6 (0.55)	
	Blurting out obscenities in public	ROII	3.2 (2.05)	✓
	Throwing something at the a public speaker	ROII	1.6 (0.55)	
Fear of act on other impulses (e.g. to rob bank, to steal groceries, to overeat)	Picking something up and throwing it through a window	ROII	1.8 (0.84)	
	I sometimes feel the need to break or damage things for no reason	PI	1.6 (0.55)	
	Grabbing the money out of a cashier's till when purchasing an item	ROII	1.6 (0.55)	
	Holding up the bank teller while doing routine banking	ROII	1.6 (0.55)	
	Shoplifting or stealing something even though I don't really want it	ROII	3.4 (1.52)	✓
Fear will be responsible for things going wrong (e.g., others will lose their job)	If I don't do things just right, something bad will happen to my friends or family	ROII	4.4 (1.34)	✓
Fear something terrible might happen (e.g. fire, burglary)	I left the door of the house unlocked and there is an intruder inside	ROII	4.8 (0.45)	
	I left the heat, stove or lights on in the house which may cause a fire	ROII	4.8 (0.45)	✓
	I left the water taps running in the house which may cause a flood	ROII	4.8 (0.45)	
Contamination - secretions (urine, sweat saliva)	Thinking that bodily secretions are dangerous	OCTC	3.2 (0.84)	
	I think contact with bodily secretions (perspiration, saliva, urine etc.) may contaminate my clothes or somehow harm me	PI	4.0 (1.73)	✓

	I am bothered by thoughts that I may have sticky substances or residues on my hands	Y-BOCS	3.6 (0.89)	
Contamination -dirt or germs	I will become dirty or contaminated, by touching public door-knobs	ROII	4.6 (0.55)	✓
	I think my hands are dirty after reading a newspaper	HOCI	4.4 (0.89)	
	I think my hands are dirty after touching money	PI	4.0 (1.41)	
	I will become contaminated with germs by using public facilities (telephone, toilets etc.)	ROII	4.6 (0.55)	
Contamination - environmental (asbestos, radiation, toxic waste)	I will be contaminated by environmental pollution	Y-BOCS	3.2 (0.84)	✓
	I am concerned about environmental contamination (e.g. radiation, asbestos)	Y-BOCS	3.2 (0.84)	
Excessive concern with household items (e.g. cleansers, solvents, pets)	Thinking I have to wash after touching animals	HOCI	4.2 (1.30)	✓
Contamination - catch disease	I am going to catch a disease from touching a toilet seat or tap	ROII	4.6 (0.55)	✓
	I avoid public toilets because I am afraid of disease and contamination	PI	4.6 (0.55)	
	I will contract a fatal disease from touching things strangers have touched	ROII	4.2 (1.10)	
Contamination - give disease	I will transmit a fatal disease by using public facilities	ROII	2.8 (0.84)	✓
Forbidden or perverse sexual thoughts, images, or impulses	Having sex with a person who has authority over me (vicar, boss)	ROII	1.6 (0.55)	
	Having sex with a person who I would never want to have sex with	ROII	1.6 (0.55)	✓

Sexual content involves children	Fear of molesting a child, despite no desire to do so	ROII	3.0 (2.00)	✓
Sexual content involves animals	I have perverse sexual thoughts, images and impulses	OCBC	2.8 (2.05)	✓
	Thoughts of engaging in a sexual act that I would find completely disgusting	CCOCDS	2.8 (1.79)	✓
Sexual content involving incest				
Sexual content involves homosexuality	Thoughts of engaging in sexual activity that goes against my sexual preference (e.g., homosexual, heterosexual)	ROII	3.0 (2.00)	✓
Aggressive sexual behaviour towards others	Lifting my skirt or dropping my pants, thereby indecently exposing myself	ROII	2.4 (0.89)	✓
Hoarding/collecting	Thinking I have to hang on to useless objects	GOCS	3.4 (1.52)	
	Thinking I need to collect certain things	OCBC	4.2 (1.30)	✓
	I am very concerned about hoarding things	CCOCDS	3.2 (1.30)	
	Thinking I might be throwing something away by mistake	CCOCDS	3.0 (1.87)	
	I think I need to inspect the rubbish before throwing it out in case I am throwing something away by mistake	CCOCDS	3.6 (1.52)	✓
	I have thoughts about losing things	Y-BOCS	3.2 (1.64)	
Religious concerns (having blasphemous thoughts)	I might have said something blasphemous	CCOCDS	3.4 (1.82)	✓

Symmetry or exactness	Thinking I must check particular objects and furniture are always in the same position	OCTC	4.6 (0.55)	✓
	I am very concerned with the need for exactness and symmetry	OCBC	4.4 (0.89)	
	Thinking I need to align objects "just so"	CCOCDS	4.4 (0.89)	
	Thoughts about things not being symmetrical		3.8 (1.64)	
	Thinking that things may not be in order before I leave the house	OCTC	4.2 (1.10)	
	Thoughts about having to do routine activities in a particular order or a certain number of times	GOCS	4.4 (0.89)	
	I often have thoughts about doing things perfectly and exactly	OCTC	4.0 (1.41)	
Need to know or remember (checking thoughts)	I have thoughts about needing to re-open envelopes before sending them	GOCS	3.4 (1.52)	
	I have doubts that make me re-check forms, documents, cheques etc., to make sure I have filled them in correctly	PI	3.6 (1.52)	✓

Y-BOCS - Yale-Brown Obsessive Compulsive Scale, (Goodman, *et al.* 1989).

ROII - Revised Obsessive Intrusions Inventory, (Purdon and Clark, 1994).

PI - Padua Inventory, (Sanavio, 1988)

OCTC - Obsessive Compulsive Thoughts Checklist, (Bouvard, Mollard, Cottraux and Guerin, 1989).

HOCI - Hamburger Obsession Compulsion Inventory, (Zaworka and Hand, 1980).

GOCS - National Institute of Mental Health, Global Obsessive Compulsive Scale, (Goodman and Price, 1992).

CCOCDS - Checklist of Common Obsessive Compulsive Disorder Symptoms, (Schwartz, 1996)

OCBC - Obsessive Compulsive Behavioural Checklist, (Powell, 1992).

Interrater agreement amongst the clinicians was calculated using r_{wg} statistic (James, Demaree, and Wolf, 1984, 1993). This is a method of assessing within-group interrater reliability with multiple judges. The rate of agreement was 0.7 or above on all but two of the sixty three items. Furthermore a calculation of the multiple-item

estimator revealed the level of agreement within the group for all 63 items to be

$$r_{wg(63)} = 0.99.$$

The mean rating of each item by the clinicians was used for the selection of the most representative items for each of the 24 categories of obsession. Where the five clinicians had given equal weightings to a number of items for the same category, the item was selected on the basis of how closely the wording represented an obsessional thought rather than a behaviour or impulse. For instance, for the category

“Contamination - catching a disease” the item *I am going to catch a disease from touching a toilet seat or tap* was chosen over *I avoid public toilets because I am afraid of disease and contamination*, as the second item is less overtly about a thought or obsessions and also makes reference to safety or avoidance behaviour.

One category from Y-BOCS checklist of obsessions that no items could be found for was that of “Sexual content involving incest”, therefore no items was included for this.

The overall mean rating for all items was high which is understandable given that all the items were derived from pre-established measures of OCD. Of the items selected for each category, only 5 out of the 24 fell below the overall mean score. All of these five items were derived from the ROII. The data from Purdon and Clark's (1994) study showed that three out of the five items were endorsed by over 27% of normal participants in their study and the other two by 15% and 21% respectively. Given that

these are normal participants, it seems reasonable to suppose that they will have higher rates of endorsement by participants with OCD.

Conclusion

Results from the clinicians questionnaire allowed the selection of 24 representative items for the development of the new scale (see Appendix B), the Obsessive Thoughts Appraisal Scale (OTAS). Five appraisal questions were then entered for each item on the scale as follows:

- 1) frequency
- 2) distress
- 3) how likely is this to happen
- 4) thinking this keeps me safe
- 5) thinking this is senseless/irrational.

The first two are key to assessing the degree to which the OTAS measures OCD symptomatology. The third and fifth are indicators of ego-dystonicity. If the obsessions are ego-dystonic one would expect high scores on judgements of irrationality, and low scores on the likelihood of the obsessive thought coming true.

The fourth was included to have a measure that was more explicitly an ego-syntonic judgement. It was speculated that agreement with this dimension would be indicative that the participant values and identifies with the content of the obsession, that is the obsession is a strongly held belief rather than a transitory ego-dystonic intrusive thought.

Though these appraisal dimensions were chosen to test the specific hypotheses of this thesis, previous research has attempted to address these issues. One and two represent the same two categorical questions that appear on the OCI (Foa, Kozak, Salkovskis, Coles, and Amir, 1998) and enable one to examine the relationship between the frequency of occurrence of obsessive thoughts and the level of distress produced by them. In differentiating OCD pathology, it is the distress variable that takes precedence. Appraisal dimensions three and five were used to assess ego-dystonicity. Three is similar in form to the appraisal question used by Purdon and Clark (1994) in the ROII "How likely is it that the thought itself will come true in real life?", but as previously mentioned this was applied to only one obsessive thought in their study. Likewise Neziroglu *et al.* (1999) had used the questions "How reasonable is your belief?", "Is your belief justified or rational?" and "Is the belief logical or seem reasonable?" which are similar in meaning to question five.

Following the reporting of the development of this new scale, it is now possible to operationalise the hypotheses outlined at the end of chapter 7.

Hypothesis 1: General claims about the phenomenology of obsessive thoughts

To examine this hypothesis, the scores from the three sub-scales were transformed from 5-point scores (e.g. 1= strongly agree, 2= moderately agree, 3 = uncertain, 4= moderately disagree, 5= strongly disagree) to a dichotomised scale with "1= strongly agree" and "2= moderately agree" being judged as endorsement of the item and

scoring 1, while "3 = uncertain", "4= moderately disagree", "5= strongly disagree" scored 0.

1a. Obsessive thoughts as senseless

Each participant rated 24 obsessive thought items on whether or not each was senseless. This gives a total score of between 0 and 24, depending on how many items are endorsed as senseless. It is predicted that the mean rating for all participants of the number of items that they thought are senseless will be less than 22.8 (95% of items).

1b. Obsessive thoughts as unlikely to happen

Each participant rated 24 obsessive thought items on whether or not it was likely to happen. This gives a total score of between 0 and 24, depending on how many items are endorsed as likely to happen. It is predicted that the mean rating for all participants for the number of items that they thought were likely to happen will be greater than 1.2 (5% of items).

1c. Obsessive thoughts as not keeping one safe

Each participant rated 24 obsessive thought items on whether or not "thinking this keeps me safe". This gives a total score of between 0 and 24, depending on how many items are endorsed as "thinking this keeps me safe". It is predicted that the mean rating for all participants for the number of items that they judged "thinking this keeps me safe" will be greater than 1.2 (5% of items).

Hypothesis 2 : Influence of participant symptomatological status

2a.

People with a high score on the OCI - D (OCI - Distress scale; indication of degree of obsessive-compulsive symptomatology) will have significantly lower scores on the "senseless" scale of the OTAS than people with low scores on the OCI.

2b.

People with a high score on the OCI - D will have significantly higher scores on the "likely to happen" scale of the OTAS than those with low scores on the OCI.

2c.

People with a high score on the OCI - D will have significantly higher scores on the "thinking this keeps me safe" scale of the OTAS than those with low scores on the OCI.

Hypothesis 3 : Influence of obsessive thought types

It should be noted that for the purpose of these hypotheses, as there are a different number of items concerning contamination (5) compared with aggressive or sexual content (7), the means of these groups of items will be used for comparison.

3a.

Obsessive thoughts concerning contamination (Items 3, 9, 11, 12, 13) will be rated as significantly less senseless than thoughts concerning aggressive or sexual content (Items 5, 8, 15, 16, 17, 18, 19).

3b.

Obsessive thoughts concerning contamination (Items 3, 9, 11, 12, 13) will be rated as significantly more "likely to happen" than thoughts concerning aggressive or sexual content (Items 5, 8, 15, 16, 17, 18, 19).

3c.

Obsessive thoughts concerning contamination (Items 3, 9, 11, 12, 13) will be rated significantly higher on the "thinking this keeps me safe" scale than thoughts concerning aggressive or sexual content (Items 5, 8, 15, 16, 17, 18, 19).

Hypothesis 4: Relationship between variables of OTAS and OCI

4a.

A significant positive correlation will exist between the measures of OCD symptomatology OCI - F and OCI - D and the OTAS measure of senselessness (which is reverse scored).

4b.

A significant positive correlation will exist between the measures of OCD symptomatology OCI - F and OCI - D and the OTAS measure "likely to happen".

4c.

A significant positive correlation will exist between the measures of OCD symptomatology OCI - F and OCI - D and the OTAS measure "thinking this keeps me safe".

Hypothesis 5 : Factor analysis of OTAS

Factor analysis will support the grouping of items (3, 9, 11, 12, 13) and items (5, 8, 15, 16, 17, 18, 19) as separate factors.

Chapter 9: Administration of questionnaires

This chapter outlines the method and procedure for the administration of the three questionnaires used in this study. Chapters 10 and 11 cover the issue of the validation of the measure generated for this research (OTAS) and the testing of the experimental hypotheses.

Measures

Three measures were included in the questionnaire pack; the OTAS (Appendix B), the Hospital Anxiety and Depression Scale and the Obsessive-Compulsive Inventory.

Hospital Anxiety and Depression Scale. (*HADS, Zigmond and Snaith, 1983*). The Hospital Anxiety and Depression scale is a 14 item self-report measure of anxiety and depression. It was developed as a screening tool for depression and anxiety (Spinhoven *et al.* 1997). Though it was designed for use in hospitals, it has been used frequently with community samples (Wilkinson and Barczak, 1988; Dunbar, Ford, Hunt and Der, 2000). Other measures could have been used, such as the Beck Depression Inventory (BDI, Beck, Ward, Mendelson, Mock and Erbaugh, 1961) and the Beck Anxiety Inventory (BAI, Beck, Brown, Epstein and Steer, 1988) but using these two questionnaires would have meant that participants had to answer 42 questions in total on depression and anxiety. As noted above the HADS is only 14 questions in total. Given that the other two measures in this study had a total of 204 questions between them, it was felt that a screening tool such as the HADS would

have the benefit of being far briefer and would therefore be less likely to substantially reduce rates of questionnaire return.

Obsessive-Compulsive Inventory (OCI)². (Foa, Kozak, Salkovskis, Coles, and Amir, 1998). The Obsessive Compulsive Inventory is a relatively new scale. It is a self report measure consisting of 42 items with seven sub-scales. These are rated on two 5-point Likert scales for frequency and distress. It has been described as the most comprehensive measure of OCD symptomatology, and has the benefit of a heterogeneous item selection. In student samples (Simonds, Thorpe and Elliot, 2000) the OCI has been shown to have good test re-test reliability (0.88), excellent internal consistency (Cronbach α = 0.94) and good convergent validity with the Maudsley Obsessive Compulsive Inventory (0.74).

Ethical Approval

The project was reviewed and approved by the University of Leicester Clinical Psychology Research Committee. Ethical approval was granted by the Southern Derbyshire Local Research Ethics Committee.

Participants

Three samples were recruited for this study. Each was recruited slightly differently and had small modifications in procedure so each will be described separately.

² See appendix c for scale in full.

Sample 1: Non-clinical sample

Procedure. Questionnaire packs were circulated to students on the university campus. Entrance in a small prize draw was used as an encouragement to participate. Participants were given a brief explanation that the questionnaires were part of a study into the occurrence and experience of repetitive thoughts. If they agreed to take part, they were given a questionnaire pack which included copies of the OTAS, OCI and HADS, with a short demographic sheet at the front (see appendix D). The order of presentation of each of the questionnaires was counterbalanced, with all six possible orders being equally represented amongst the questionnaires given out. Analysis of the questionnaires returned indicated that no particular order was significantly over-represented.

Participants. Sixty-nine students returned their questionnaires. This represented a response rate of 34.5%.

Sample 2: Clinical : Self help groups

Procedure. Advertisements seeking participants for a study on obsessive-compulsive disorder (see appendix E) were placed in two self-help group magazines; Obsessive Action and the newsletter of the National Phobics Society. Interested participants who had received a diagnosis of obsessive-compulsive disorder, or who felt that they had difficulties with obsessions and compulsions, were asked to provide the principle researcher with a name and address to send the questionnaire pack to, either by phone, letter or e-mail.

Participants. Eleven people wrote, twenty-five telephoned and twelve e-mailed for inclusion in the study. Twenty-three returned completed forms representing a response rate of 52%.

Sample 3: Clinical : Cognitive Behavioural Psychotherapy Unit referrals

Procedure. All patients referred to the Southern Derbyshire Mental Health Trust's Cognitive Behavioural Psychotherapy Unit were seen for a screening interview, and if the patient had been referred with obsessive-compulsive disorder they were asked if they would like to take part in the study. Secondly, patients that had already had a screening interview with a cognitive behavioural therapist and had a diagnosis of obsessive-compulsive disorder were written to with the questionnaire pack and asked if they would be willing to participate. Both groups of patients were given an information sheet (see appendix F), consent form (see appendix G) and questionnaire pack, along with a stamped, addressed envelope to the author. This allowed patients to choose whether or not to participate and return the questionnaire without their clinician knowing. It was hoped that this would allow patient to make a free choice to participate or not, and that they would not feel pressured into doing so simply to please their therapist.

Participants. Of the sixty-eight questionnaires given out eighteen were returned; a response rate of 26%.

Analysis tool

All the data analysis and statistical tests were carried out using SPSS (version 10.1).

Demographics

Table 3 presents the demographic data for the three different samples.

Table 3. Demographic information: number, mean age and sex ratios of both clinical and control groups.

Sample source	N	Mean age (SD)	Gender (M/F)
Control	68	24.93 (10.37)	21/36
Clinical - self-help	23	37.75 (10.95)	9/11
Clinical - patient	18	35.33 (16.03)	5/7

It will be noted that both the clinical samples appear older than the control. The clinical self-help group were significantly older than the control ($U = 189$, $z = -4.51$, $p < 0.0001$, $n = 78$). The patient group were also significantly older than the control ($U = 204$, $z = -2.27$, $p < 0.05$, $n = 70$). The difference between the two clinical groups was not significant ($U = 112$, $z = -0.312$, n.s., $n = 32$).

Chapter 10: Psychometric properties of the OTAS

Criterion Validity

As a method of assessing the criterion validity of the OTAS, a comparison was carried out of the frequency of obsessive thoughts in both the clinical and non-clinical samples. If the measure is to have good criterion validity one would expect significantly higher frequency of obsessive thought occurrence as measured by the OTAS for the clinical group when compared with the non-clinical group. Table 4. shows the mean and standard deviation for this variable by groups. Analysis using the Mann-Whitney U test revealed that the clinical group experienced significantly more frequent obsessive thoughts than the non-clinical group ($U= 969.5$, $z=-2.68$, $p< 0.007$, $N=109$).

Table 4. Means and standard deviations for clinical and non-clinical samples on the frequency dimension of the OTAS scale.

Sample source	n	Mean frequency score (SD)
Control	68	21.29 (13.84)
Clinical (self-help and patient)	41	29.34 (16.95)

Convergent validity

A second measure of the validity of the new scale is to compare it with an existing measurers of OCD. There should be a relationship between scores on the OTAS and the other measure of obsessionality used in this study, the Obsessive Compulsive Inventory (Foa, Kozak, Coles, Amir and Salkovskis, 1998).

One would expect significant correlations between the OCI and OTAS frequency and distress scores. A reason to expect some variance between the two scales does exist. The OCI was designed to differentiate obsessive-compulsive patients from patients with other anxiety disorders and from non-patients. On the other hand intrusive thoughts scales, such as those which form the pool of items for the OTAS aim at identifying thoughts which occur commonly in both the normal population and in people with OCD. The hypothesised difference being in terms of frequency with which the thoughts are experienced and the way in which they are appraised. This does suggest that some variability between the two scales would be expected. Furthermore the OTAS concerns itself exclusively with obsessions whereas the OCI covers both obsessions and compulsions.

Table 5. Spearman correlation coefficient of sub-scales on OCI, OTAS (n=109) and HADS (n=99).

	OTAS - F	OTAS - D	OCI - F	OCI - D	HADS - Dep	HADS - Anx
OTAS - F	1.00					
OTAS - D	.24*	1.00				
OCI - F	.70**	.33**	1.00			
OCI - D	.67**	.32**	.95**	1.00		
HADS - Dep	.43**	.20*	.54**	.53**	1.00	
HADS - Anx	.46**	.24*	.61**	.60**	.63**	1.00

Notes: OTAS - F= Obsessive Thoughts Appraisal Scale - Frequency Score, OTAS - D = Obsessive Thoughts Appraisal Scale - Distress Score, OCI - F = Obsessive-Compulsive Inventory - Frequency score, OCI - D = Obsessive-Compulsive Inventory - Distress score, HADS - Dep= Hospital Anxiety and Depression Scale - Depression score, HADS - Anx = Hospital Anxiety and Depression Scale - Anxiety score.

* = p<0.01, **=p<0.005

As can be seen from table 5, both measures of obsessions correlated reasonably well.

The OTAS frequency scale correlating with the OCI frequency scale with a value of

Spearman rho=0.70, $p<0.001$. The OTAS distress scale showed a weaker correlation with the OCI distress scale with a value of Spearman rho=0.32, $p<0.001$.

For the OTAS to be regarded as a valid measure of obsessive thoughts, it should also correlate more highly with the measure of obsessive-compulsive disorder, the OCI, than it does with the more general measures of both depression and anxiety in the form of the HADS. This has been a frequent failing of intrusive thought measures in the past (e.g. Clark, 1992; Clark and Hemsley, 1985; Freeston, Ladouceur, Thibodeau and Gagnon, 1992)). Table 5 shows that the correlation coefficients for the OTAS frequency and distress scale are much higher with the OCI measure than for either the depression or anxiety scale of the HADS.

Internal consistency

Cronbach alpha (Table 6) was calculated to assess internal consistency of the overall scale and sub-scales. All the alpha coefficients exceed 0.7, therefore the OTAS scale shows high internal consistency.

Table 6. Cronbach alpha coefficients for sub-scales and total scale of the OTAS

Sub-scale	Cronbach Alpha Coefficient
Frequency	0.87
Distress	0.93
Likelihood	0.83
Safety	0.94
Senselessness	0.92
Total	0.86

Chapter 11: Test of hypotheses

Descriptive statistics

Means and standard deviations were calculated for the HADS, OCI and OTAS including subscales, for each of the three samples and are shown in Table 7.

Table 7. Means and standard deviations on HADS, OCI and OTAS by sample.

	Control n= 68	Patient n= 18	Self-help n= 23
	<u>M</u> (SD)	<u>M</u> (SD)	<u>M</u> (SD)
HADS - Depression	3.72 (2.93)	5.33 (3.32)	8.26 (4.73)
HADS - Anxiety	7.85 (3.73)	14.22 (3.80)	13.30 (3.95)
OCI - Frequency	37.69 (27.34)	64.00 (44.73)	80.17 (31.07)
OCI - Distress	30.57 (29.16)	60.94 (44.70)	77.57 (32.81)
OTAS - Frequency	21.29 (13.84)	26.50 (18.66)	31.57 (15.53)
OTAS - Distress	47.31 (20.35)	48.50 (27.39)	53.35 (24.94)
OTAS - Happening	26.75 (12.60)	21.67 (14.29)	25.61 (12.46)
OTAS - Safety	29.96 (18.64)	15.72 (15.01)	32.35 (21.44)
OTAS - Irrationality [†]	35.18 (17.98)	19.67 (15.05)	22.48 (17.54)

[†]Reverse scored: higher the score, the less irrational / senseless obsessions are judged to be.

Data analysis considerations

It was planned that the analysis of data for this study would involve the comparison of a clinical and non-clinical sample on their responses to obsessive thoughts. An initial viewing of the data demonstrated that this kind of comparison might pose some difficulty. The Obsessive-Compulsive Inventory was included in the questionnaire pack to have an objective measure of participants obsessive-compulsive symptomatology. It was expected that a small number of participants in the clinical sample might have low scores for two reasons. Firstly, participants referred to the Southern Derbyshire Mental Health Trust's Cognitive-Behavioural Psychotherapy Unit were included on the basis of the referral diagnosis which may

not always have been accurate. Secondly with participants from the self-help groups the study relied on them having been given a reliable diagnosis of OCD and reporting that accurately themselves. Error may have occurred in both these sources for this reason. Likewise it was expected that the non-clinical sample would contain a small number of sub-clinical or undiagnosed cases of OCD. Analysis of the data suggested that these mis-placed participants were not small enough in number. This problem was compounded by the response rate to the questionnaire which was relatively low for the clinical sample therefore only a relatively small clinical sample were recruited.

It was decided that a more coherent way in which to make comparisons between the control and clinical groups was to pool the clinical and non-clinical databases, and to divide participants on the basis of an objective measure of their obsessionality, the OCI-Distress score.

In the original study reporting the development of the OCI measure, Foa *et al.* (1998) cite both the means and standard deviations for a clinical OCD sample and a non-clinical control group (see table 8). They also suggest using a cut-off score of 40 to differentiate between non-clinical and clinical groups. They justify this with an analysis that showed that 80% of the clinical and 80% of the non-clinical participants could be correctly identified on this basis. Though this seems like a fairly robust figure, for this study the tighter control of confidence intervals will be used to form two groups which will be referred to as "clinical" and "control". A confidence interval

was calculated from Foa *et al.*'s (1998) original data. This produced a lower limit on the distress score for the "clinical" group of 60.05, and an upper limit on the distress score for the "control" group of 28.88. It is envisaged that the use of the OCI distress score to discriminate these groups, should also correctly identify the source of the referral (clinical or non-clinical) for at least 70% of the participants.

Table 8. Mean scores (standard deviations) [confidence intervals 95%] for Obsessive Compulsive Inventory - Distress Rating for clinical and non-clinical groups in original study (Foa *et al.* 1998)

Control (n=126)	Clinical (n=99)
<u>M</u> (SD) [CI ₉₅]	<u>M</u> (SD) [CI ₉₅]
25.25 (20.80) [21.62 - 28.88]	66.33 (31.90) [60.05 - 72.61]

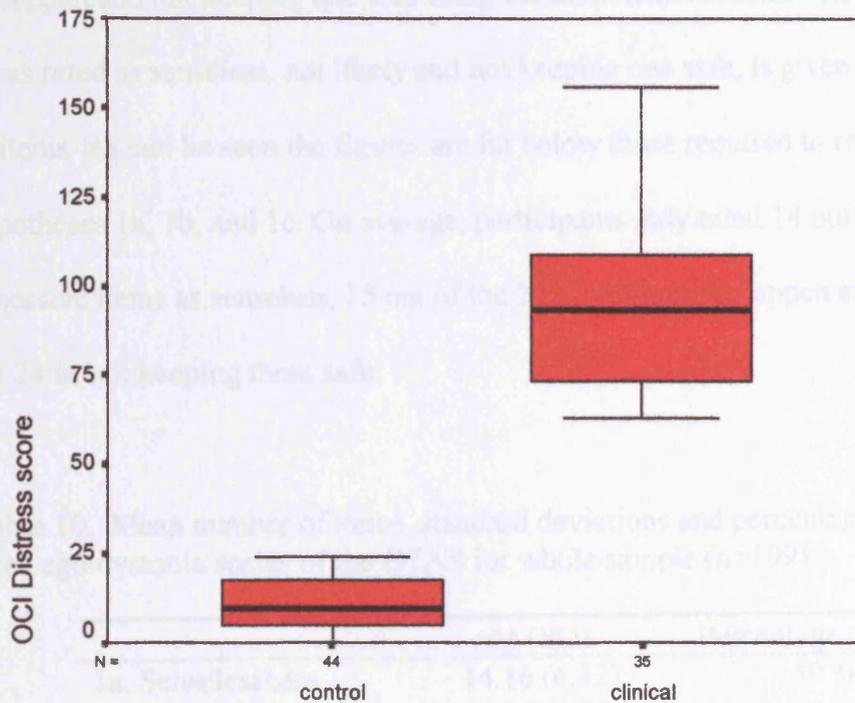
This resulted in the formation of two groups for further analysis, the characteristics of which are detailed in table 9. It will be noted that the differences in age present in the raw sample (see chapter 9) have been eliminated by this processing of the data. The differences in age between the control and clinical groups is non-significant ($U = 481.50, z = -0.42, n.s., n = 65$).

Table 9. Mean OCI distress scores, age, and sex ratios of clinical and control groups formed by confidence intervals around means from original study.

	OCI -Distress <u>M</u> (SD)	Age <u>M</u> (SD)	Sex (Male / Female ratio)
Control (n=44)	10.73 (7.62)	29.18 (12.63)	41% : 59%
Clinical (n=35)	93.57 (23.48)	28.56 (11.44)	43%: 57%

As can be seen in figure 3 these two groups are significantly different in their OCD composition based on the OCI distress scores.

Figure 3. Boxplot of clinical and control groups on OCI-distress score.



As a check to the validity of this process it was assumed that this should correctly predict sample source (clinical or non-clinical) for at least 70% of the sample, and this indeed proved to be the case with 71% of the clinical group having come from the clinical sample and 86% of the control group having come from the non-clinical sample.

Hypotheses Testing

Hypothesis 1: General claims about the phenomenology of obsessive thoughts

Table 10 gives the means and standard deviations for ratings as senseless, not likely to happen and not keeping one safe using the dichotomised scale. The proportion of items rated as senseless, not likely and not keeping one safe, is given as a percentage of items. As can be seen the figures are far below those required to refute the null hypotheses 1a, 1b, and 1c. On average, participants only rated 14 out of the 24 obsessive items as senseless, 15 out of the 24 as unlikely to happen and only 13 out of the 24 as not keeping them safe.

Table 10. Mean number of items, standard deviations and percentages for ratings on three ego-dystonia scales of the OTAS for whole sample (n=109).

	<u>M (SD)</u>	<u>Percentage of items</u>
1a. Senselessness	14.16 (6.32)	59 %
1b. Unlikelihood	15.28 (4.75)	64 %
1c. Lack of safety	13.37 (7.51)	57 %

Clearly hypothesis 1 is supported irrespective of the level of OCD symptomatology, participants did not universally regard all obsessive thoughts as ego-dystonic. On the contrary many were rated as not senseless, likely to happen and that thinking these thoughts helped keep them safe.

Hypothesis 2 : Influence of participant symptomatological status

To test this hypothesis the data from the two groups; control (n= 44) and clinical (n= 35) described earlier were used.

Table 11 presents the mean OTAS sub-scale scores for participants in both the control and clinical groups. Non-parametric statistical analysis of the two groups using a between-subjects Mann-Whitney U test identified statistically significant differences between the groups on all three sub-scales, supporting the three hypotheses 2a, 2b and 2c. Participants with a high score on the OCI - D had significantly lower scores on the "senseless" obsessions scale of the OTAS than people with low scores on the OCI. Participants with a high score on the OCI - D had a significantly higher scores on the "likely to happen" scale of the OTAS than those with low scores on the OCI. Participants with a high score on the OCI - D had significantly higher scores on thinking this keeps me safe" scale of the OTAS than those with low scores on the OCI.

Table 11. Means (SD) and tests of difference between participants from clinical and control groups on scores of the three ego-dystonia sub-scales of the OTAS.

	Control (n= 44)	Clinical (n= 35)	Mann Whitney		Sig.
	<u>M</u> (SD)	<u>M</u> (SD)			
OTAS - senseless†	24.52 (15.60)	34.20 (20.57)	U = 565.50	z = -2.02	p<0.05
OTAS - likely to happen	21.05 (13.87)	31.97 (10.60)	U = 387.50	z = -3.78	p<0.0005
OTAS - safety	20.34 (19.88)	36.31 (17.48)	U = 427.00	z = -3.39	p<0.001

†Reverse scored: higher the score, the less senseless obsessions are judged to be.

Hypothesis 3 : Influence of obsessive thought types

3a Thought type and senselessness

Obsessive thoughts concerning contamination (Items 3, 9, 11, 12, 13) had a mean rated as significantly less senseless than the mean rating for thoughts concerning aggressive or sexual content (Items 5, 8, 15, 16, 17, 18, 19) $W = 560$, $Z = -4.99$, $p < 0.0001$ one-tailed test, $n = 90$.

3b Thought type and likelihood

Obsessive thoughts concerning contamination (Items 3, 9, 11, 12, 13) had a mean rated as significantly more "likely to happen" than the mean for thoughts concerning aggressive or sexual content (Items 5, 8, 15, 16, 17, 18, 19) $W = 211$, $Z = -6.69$, $p < 0.00000000005$ one tailed test, $n = 88$.

3c. Thought type and safety

Obsessive thoughts concerning contamination (Items 3, 9, 11, 12, 13) had a mean rated significantly higher on the "thinking this keeps me safe" scale than the mean rating for thoughts concerning aggressive or sexual content (Items 5, 8, 15, 16, 17, 18, 19) $W = 1109$, $Z = -3.15$, $p < 0.002$ one tailed test, $n = 107$.

Hypothesis 4: Relationship between variables of OTAS and OCI

This hypothesis was to be tested using correlation coefficients. It could not be assumed that the correlations that might occur between the different variables

measured would be the same for each of the three samples therefore separate correlation tables were calculated for each sample; Table 12 shows the correlations for the control group, Table 13 for the patient group and Table 14 for the self-help group.

Table 12. Spearman correlation coefficient between sub-scales on OCI and OTAS for control group (n=68).

	OCI - F	OCI - D	OTAS - F	OTAS - D	OTAS - H	OTAS - S	OTAS - I
OCI - F	1.00						
OCI - D	.92**	1.00					
OTAS - F	.65**	.64**	1.00				
OTAS - D	.26*	.26*	.17	1.00			
OTAS - H	.51**	.51**	.63**	.44**	1.00		
OTAS - S	.40**	.45**	.42**	.35**	.63**	1.00	
OTAS - I	.62**	.57**	.57**	.14	.58**	.44**	1.00

Notes: OCI - F = Obsessive-Compulsive Inventory - Frequency score, OCI - D = Obsessive-Compulsive Inventory - Distress score, OTAS - F= Obsessive Thoughts Appraisal Scale - Frequency Score, OTAS - D = Obsessive Thoughts Appraisal Scale - Distress Score, OTAS - H = Obsessive Thoughts Appraisal Scale - Likely to happen Score, OTAS - S = Obsessive Thoughts Appraisal Scale - "thinking this keeps me safe" Score, OTAS - I = Obsessive Thoughts Appraisal Scale - Senselessness/Irrationality Score

* = p<0.01, **=p<0.005

Table 13. Spearman correlation coefficient between sub-scales on OCI and OTAS for patient group (n=18).

	OCI - F	OCI - D	OTAS - F	OTAS - D	OTAS - H	OTAS - S	OTAS - I
OCI - F	1.00						
OCI - D	.98**	1.00					
OTAS - F	.59*	.55*	1.00				
OTAS - D	.58*	.57*	.20	1.00			
OTAS - H	.77**	.76**	.28	.87**	1.00		
OTAS - S	.77**	.74**	.32	.51*	.73**	1.00	
OTAS - I	.85**	.85**	.33	.59*	.84**	.84**	1.00

Notes: OCI - F = Obsessive-Compulsive Inventory - Frequency score, OCI - D = Obsessive-Compulsive Inventory - Distress score, OTAS - F= Obsessive Thoughts Appraisal Scale - Frequency Score, OTAS - D = Obsessive Thoughts Appraisal Scale - Distress Score, OTAS - H = Obsessive Thoughts Appraisal Scale - Likely to happen Score, OTAS - S = Obsessive Thoughts Appraisal Scale - "thinking this keeps me safe" Score, OTAS - I = Obsessive Thoughts Appraisal Scale - Senselessness/Irrationality Score

* = p<0.01, **=p<0.005

Table 14. Spearman correlation coefficient between sub-scales on OCI and OTAS for self-help group (n=23).

	OCI - F	OCI - D	OTAS - F	OTAS - D	OTAS - H	OTAS - S	OTAS - I
OCI - F	1.00						
OCI - D	.96**	1.00					
OTAS - F	.73**	.67*	1.00				
OTAS - D	.31	.28	.39	1.00			
OTAS - H	.48*	.38	.39	.31	1.00		
OTAS - S	.52*	.48	.77**	.23	.33	1.00	
OTAS - I	.10	-.02	.19	.26	.66**	-.04	1.00

Notes: OCI - F = Obsessive-Compulsive Inventory - Frequency score, OCI - D = Obsessive-Compulsive Inventory - Distress score, OTAS - F= Obsessive Thoughts Appraisal Scale - Frequency Score, OTAS - D = Obsessive Thoughts Appraisal Scale - Distress Score, OTAS - H = Obsessive Thoughts Appraisal Scale - Likely to happen Score, OTAS - S = Obsessive Thoughts Appraisal Scale - "thinking this keeps me safe" Score, OTAS - I = Obsessive Thoughts Appraisal Scale - Senselessness/Irrationality Score

* = p<0.01, **=p<0.005

4a.

As can be seen in Tables 12, 13 and 14 there was a statistically significant positive correlation between the OCI - Frequency scale and the OTAS measure of senselessness (reverse scored) for the control sample (rho = 0.62, p<0.005 one tailed test, n = 68), the patient sample (rho = 0.85, p<0.005 one tailed test, n = 18) but not the self help sample and a statistically significant positive correlation between the OCI - Distress scale and the OTAS measure of senselessness (reverse scored) for the control sample (rho = 0.57, p<0.005 one tailed test, n = 68), the patient sample (rho = 0.85, p<0.01, one tailed test, n = 18) but not for the self help sample.

4b.

There was a statistically significant positive correlation between the OCI - Frequency scale and the OTAS measure of "likely to happen" for the control sample (rho = 0.51, p<0.005 one tailed test, n = 68), the patient sample (rho = 0.77, p<0.005 one

tailed test, $n = 18$) and for the self help sample ($\rho = 0.48$, $p < 0.01$ one tailed test, $n = 23$) and a statistically significant positive correlation between the OCI - Distress scale and the OTAS measure of "likely to happen" for the control sample ($\rho = 0.51$, $p < 0.005$ one tailed test, $n = 68$), the patient sample ($\rho = 0.76$, $p < 0.005$, one tailed test, $n = 18$) but not for the self help sample.

4c.

There was a statistically significant positive correlation between the OCI - Frequency scale and the OTAS measure of "thinking this keeps me safe" for the control sample ($\rho = 0.40$, $p < 0.005$ one tailed test, $n = 68$), the patient sample ($\rho = 0.77$, $p < 0.005$ one tailed test, $n = 18$) and for the self help sample ($\rho = 0.52$, $p < 0.01$ one tailed test, $n = 23$) and a statistically significant positive correlation between the OCI - Distress scale and the OTAS measure of "thinking this keeps me safe" for the control sample ($\rho = 0.51$, $p < 0.005$ one tailed test, $n = 68$), the patient sample ($\rho = 0.74$, $p < 0.005$, one tailed test, $n = 18$) but not for the self help sample.

Hypothesis 5 : Factor analysis of OTAS

The 24 items of the OTAS questionnaire were submitted to a factor analysis to determine whether the *a priori* theoretical categorisation of items into two groups: Type 1: (5, 8, 15, 16, 17, 18, 19) and Type 3: (3, 9, 11, 12, 13) would be supported empirically. For the factor analysis the distress sub-scale of the OTAS was used as this is the most relevant clinically. Though the size of the sample is relatively small,

the case-to-variable ratio justifies the use of factor analysis as there are over four times as many participants as items (Breakwell, Hammond, and Fife-Schaw, 1995).

Data from the 109 participants was subjected to a principal component factor analysis. To simplify the factor structure varimax rotation was employed. The number of factors was determined using the two criterion outlined by Loumidis and Wells (1998), namely Kaiser criterion (items with eigen values greater than 1) and a Scree test (Cattell, 1966). This suggested a five factor solution (F1, eigen value = 9.57, Variance = 39.87; F2, eigen value = 2.09, Variance = 8.69; F3, eigen value = 1.61, Variance = 6.71; F4, eigen value = 1.30, Variance = 5.42; F5, eigen value = 1.02, Variance = 4.26).

The 5 factor 24 item rotated matrix was analysed to reduce the overlap between items and exclude items where they loaded onto more than one factor with a difference between the loading of less than 0.10. Furthermore items with a factor loading of less than 0.5 were eliminated, to ensure a high degree of association between items and factors. Where factors were loaded to by a single item, that item was eliminated on the grounds that it would be difficult to interpret lone items. Following this procedure seven items were eliminated: 2, 23, 6, 7, 11, 4 and 24.

The analysis was re-run with the remaining seventeen items and this time the scree test suggested a three factor solution (Table 14). These items accounted for 60.86% of the total variance.

Table 15. Items and factor loadings for the OTAS - Distress scale (n=109)

Items	F1	F2	F3
16 Fear of molesting a child, despite no desire to do so	.85	-	-
17 I have perverse sexual thoughts, images and impulses	.79	-	-
19 Lifting my skirt or dropping my pants, thereby indecently exposing myself	.75	-	-
18 Thoughts of engaging in sexual activity that goes against my sexual preference	.74	-	-
8 I might drive into pedestrians or animals	.71	-	-
10 Images of death or horrible events	.64	-	-
15 Having sex with a person who I would never want to have sex with	.57	-	-
5 Blurting out obscenities in public	-	-	-
14 I will transmit a fatal disease by using public facilities	-	-	-
3 I will become dirty or contaminated, by touching public door-knobs	-	.79	-
12 Thinking I have to wash after touching animals	-	.76	-
9 I think contact with bodily secretions (perspiration, saliva, urine etc.) may contaminate my clothes or somehow harm me	-	.76	-
13 I am going to catch a disease from touching a toilet seat or tap	-	.66	-
1 I left the heat, stove or lights on in the house which may cause a fire	-	.58	-
21 I think I need to inspect the rubbish before throwing it out in case I am throwing something away by mistake	-	-	.80
20 Thinking I need to collect certain things	-	-	.77
22 I might have said something blasphemous	-	-	.75

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a Rotation converged in 6 iterations.

Factors 1 and 2 correspond to Type 1 and Type 3 obsessions respectively, as outlined earlier. The table below shows the two groups from the *a priori* typing and the factor analysis. As can be seen six of the seven items for the Type 1 group are the same as Factor 1, and four of the five of the Type 3 items are the same as the Factor 2 items.

Table 16. Comparison of items derived from factor analysis with those from *a priori* categorisation.

	Item numbers							
Type 1	5	8		15	16	17	18	19
Factor 1		8	10	15	16	17	18	19
Type 3			3	9	11	12	13	
Factor 2		1	3	9		12	13	

The factor analysis revealed very similar underlying structure to that which had been hypothesised *a priori*, which supports the grouping of items into two types, concerning aggressive and sexual thoughts and contamination thoughts, that had been used for hypotheses 3a, 3b, and 3c.

To check that these hypotheses would still be significant despite the one item difference between each factor and each type, the analysis was re-run for the items loading to factors 1 and 2.

Hypothesis 3 (Rerun with factor items): Influence of obsessive thought types

3a Thought type and senselessness (Rerun with factor items):

Obsessive thoughts concerning contamination and checking (Factor 2) were rated as significantly less senseless than thoughts concerning aggressive or sexual content (Factor 1) $W = 1226$, $Z = -4.467$, $p < 0.0001$ one-tailed test, $n = 90$.

3b Thought type and likelihood (Rerun with factor items):

Obsessive thoughts concerning contamination and checking (Factor 2) were rated as significantly more "likely to happen" than thoughts concerning aggressive or sexual content (factor 1) $W = 623$, $Z = -6.54$, $p < 0.000000005$ one-tailed test, $n = 88$.

3c. Thought type and safety (Rerun with factor items):

Obsessive thoughts concerning contamination and checking (Factor 2) were rated significantly higher on the "thinking this keeps me safe" scale than thoughts concerning aggressive or sexual content (Factor 1) $W = 1108$, $Z = -3.54$, $p < 0.0005$ one-tailed test, $n = 107$.

It will be noted that despite the slight differences between the *a priori* typing of items and the items groups derived from the factor analysis of the OTAS scale, all of the hypothesis are still supported with the same level of statistical significance.

Chapter 12: Discussion

The first part of this thesis reported the development of a new questionnaire, the Obsessive Thoughts Appraisal Scale (OTAS). This measure consisted of a list of obsessive thoughts common within obsessive-compulsive disorder and represent the sub-types outlined by the Y-BOCS checklist of obsessions. A 24 item list was generated and five appraisal factors added. This measure was then tested on a mixed sample (both clinical and non-clinical participants). The measure itself was shown to have good internal consistency and good parallel form reliability with an established measure of obsessive-compulsive disorder, the Obsessive Compulsive Inventory (Foa, Kozak, Salkovskis, Coles, and Amir, 1998).

The second part of the study tested the experimental hypotheses concerning ego-dystonia utilising this new measure (OTAS). Hypothesis one set out the very general claim that obsessive thoughts would not be universally regarded as ego-dystonic as measured by the three scales senselessness, likelihood and safety. This hypothesis was supported irrespective of the level of OCD symptomatology. Participants rated many of the obsessive thoughts as not senseless, likely to happen and that thinking these thoughts helped keep them safe. This is despite the fact that this hypothesis was tested on the whole sample which included a mixture of non-clinical student participants and OCD patients. To address how symptomatological status might influence ego-dystonia judgements the second hypothesis compared participants from the control and clinical groups on the three ego-dystonia scales of the OTAS. Support was found for this hypothesis, as the clinical group were significantly more likely to

judge the obsessive thoughts as less senseless, more likely, and liable to keep them safe, than the control group.

The third hypothesis was that some types of obsession are more ego-syntonic than others. A comparison of contamination obsessions with aggressive and sexual intrusive thoughts showed that this was the case with the contamination obsessions displaying lower rates of ego-dystonia on all three scales than the aggressive and sexual intrusive thoughts.

The fourth hypothesis was that each of the measures of ego-dystonia would correlate with both the distress and frequency scales of the OCI. This would show that the more obsessive the participant, the more likely they are to believe obsessive thoughts not to be ego-dystonic. This is precisely what was shown with strong correlations found in both the control and patient samples and partial support found in the self-help sample.

Hypothesis five was tested using a factor analysis of the OTAS scale, to check that the *a priori* classification of items as either Type 1 concerning aggressive and sexual intrusive thoughts or Type 3 concerning contamination was justified by the underlying structure of the OTAS scale. The factor analysis broadly supported the *a priori* selection of items with six of the seven items for the Type 1 group being the same as those items loading to Factor 1, and four of the five items of Type 3 being the same as the items loading to Factor 2. Examination of the content of the items

loading to factor 1 showed that they were primarily of an aggressive (e.g. items 8, 10) or sexual (e.g. 15, 16, 17, 18, 19) nature. Likewise the items loading to Factor 2 mostly concerned contamination themes (e.g. 3, 9, 12, 13) but also included one item concerning the fear of having caused a fire (item 1). Hypotheses 3a, 3b, and 3c which relied upon this typing were all re-run using the items derived from the factor analysis and all were found to still be supported, at the same level of statistical significance.

There are a number of methodological issues in this study that need addressing. One of the shortcomings of using the Y-BOCS as the criterion for a comprehensive range of obsessive thoughts was that some of the items did not share the key characteristics of an unwanted, intrusive thought, but were rather the mental precursors to compulsions. For instance, if one feels compelled to check the rubbish before throwing it out, one can speculate that there must be some cognition that pre-empts this. According to traditional definitions of obsessions and compulsions, the thought would be the obsession that the compulsion tries to neutralise. Therefore one can hypothesise that in this instance it would be a thought such as "If I don't check the rubbish I may throw out something of value by mistake".

Some items on the OTAS scale may have lacked a uniformity of phrasing that meant that there may have varying interpretations by participants of what was being asked by the appraisal questions. One of the outcomes of this is dimensions such as "likely to happen" might at times be measuring compulsivity rather than belief in likelihood

of obsessions. If a participant scores highly on the likely to happen appraisal of the rubbish question (item on 21), they may be endorsing the likelihood of having to carry out the compulsion rather than the likelihood of the obsessive fear happening. Though this risk was present, it should be noted that it would not have effected the key sets of items analysed, those concerning contamination and the aggressive and sexual intrusive thoughts.

In trying to distinguish between ego-dystonic and ego-syntonic obsessions some oversimplification has taken place. It is perfectly possible for an obsessive patient to experience contamination obsessions as ego-dystonic. They could experience the thoughts as senseless, believing that no risk is really involved in carrying out a particular activity, such as making a drink for a family member, but still be disturbed by unwanted thoughts that they might be inadvertently poisoning the person. The aim of this thesis has been to explore how sometimes these thoughts may not have been ego-dystonic and that this relates more often to obsessive thoughts of a particular type.

Test-retest reliability of the OTAS was not examined in this research because of the limited time span of the project, but this would be useful to establish the reliability of the measure over time.

Due to both time-limits and the practical constraints of finding large enough samples of participants, no attempt was made to control for specific relevant variables such as

previous episodes of therapy, or duration of disorder or for more general variables such as socio-economic status or years of education. Despite this, strong relationships were found between the ego-syntonia variables and the degree of obsessionality, which suggests that this relationship may be fairly robust. The notion of ego-dystonia used in this thesis was restricted to three constructs; senselessness, unlikelihood and not keeping one safe. This is by no means an exhaustive description of ego-dystonia, and many other aspects could be examined (e.g. intrusiveness, consistency with other beliefs, expectation that others share the belief).

The model proposed in chapter 5 suggested three forms of obsessive thought. It will have been apparent that the subsequent analysis and hypothesis testing aimed only at Type 1 (intrusive thoughts) and Type 3 (contamination obsessions). This restriction was necessary given the methodology. It was not possible to examine whether participants had derived their belief in the likelihood of an obsession through a process of thought-action fusion (Rachman and Shafran, 1999). This element of the proposed model is therefore entirely speculative and validation would require further and more sophisticated methods of enquiry.

Salkovskis's cognitive model (1985, 1989, 1998) of obsessive compulsive disorder has been very useful in providing an explanatory framework for intrusive thoughts and their role in OCD. The shortcoming of this model is that by overemphasising the comparison with the cognitive model of panic, it risks stereotyping obsessions as all of one kind, that of intrusive thoughts. Much of the research on obsessive-compulsive

disorder in recent years has focused on highly ego-dystonic intrusive thoughts (Purdon and Clark, 1993, 1994; Freeston, Ladouceur, Thibodeau, and Gagnon, 1991, 1992; Freeston and Ladouceur 1993; Freeston, Ladouceur, Provencher, and Blais, 1995; Freeston and Ladouceur, 1997; Rassin, Merckelbach, Muris, and Spaan, 1999). This dissertation set out to examine the evidence in favour of ego-syntonic obsessions, and found empirical support for them. The existence of ego-syntonic obsessions suggests that there may be more than one process in the formation and maintenance of obsessions. It will be recalled that Salkovskis *et al.* (1998) claimed that obsessive-compulsive patients feel fear when confronted with an obsession despite regarding it as senseless and unlikely to happen because they combine the judgement of perceived probability with their assessment of the meaning of the event. The results of this research do not support this position. Obsessive-compulsive distress was associated with an increased belief in the risk of the obsession happening and in judging it to be less senseless.

There is some literature (Insel and Akiskal, 1986; Neziroglu, McKay Yaryura-Tobias, Stevens and Todaro, 1999; O'Dwyer and Marks, 2000) that has concerned itself with ego-syntonic obsessions, but it is rarely ever described in these terms possibly because the assumption has been that it is just some patients for whom the obsessions are ego-syntonic rather than it being the case that it is some obsessions (i.e. some content specific obsessions) that tend to be ego-syntonic.

Foa (1984) has reported on the link between patients with over-valued ideation and behavioural treatment failure. Tynes, White, and Steketee (1990) suggest that this link justifies further research to "assess the degree to which OCD patients believe in their obsessional ideas" (p469). Furthermore O'Dwyer and Marks (2000) have highlighted the fact that judgements about obsessive beliefs may vary greatly according to context, with patients repudiating the belief while with the therapist, but being greatly convinced when in the "dangerous" situation. This thesis has found more support for the existence of "overvalued ideas", indeed it might suggest that they are more common in OCD than had previously been supposed.

The differentiation made in this thesis between "thoughts" being ego-dystonic and "states-of-affairs in the world" being ego-dystonic suggests two differing strategies for patients. The former reflects the type 1 obsessions which concern mental events and imply the need for increase thought control. The latter reflects the type 3 obsession which concern danger in the external world and imply the need to control one's risk in the environment (e.g. by repeated washing, disinfecting, avoiding "dangerous" substances). Recent work by Menzies has focused specifically on the notion of overvalued danger expectancies particularly concerned with checking and washing compulsions and has been the basis for the development of the Danger Ideation Reduction Therapy (DIRT) package. Jones and Menzies (1997) found that likelihood ratings for fear of catching a disease was more closely associated with compulsive washing scores than ratings for responsibility. This view, that judgements

about dangers in the external world are a central cognitive mediator in contamination OCD, fits with the notion of ego-syntonic obsessions outlined in this thesis.

The clinical implications of this research are two-fold, having relevance to diagnostic issues and to clinical treatment. Firstly, the changes in definitions of OCD from DSM-III (APA, 1980) to DSM-III-R (APA, 1987) and DSM-IV (APA, 1993) have made minor modifications to the importance of ego-dystonia as a defining feature of obsessions, but should the results of this research be replicated and shown to be robust, the definition would require a more radical change. One would need to differentiate between the type of obsession and whether or not one would expect it to be ego-dystonic or ego-syntonic within OCD.

Secondly the current cognitive-behavioural treatment based on Salkovskis's model of OCD provides a good structure for working with ego-dystonic obsessions. Ego-syntonic obsessions may require a different approach. One would not want to return to the "bland reassurances" that Salkovskis warned against, but challenging mistaken contamination beliefs may be necessary. As previously mentioned, a possible way forward that has appeared in the literature in recent years is an approach developed by Jones and Menzies (1997) Danger Ideation Reduction Therapy (DIRT, Menzies, Harris, Cumming, and Einstein, 2000). This approach does not involve any exposure, but rather focuses directly on the overvalued ideas about threat and attempts to modify these beliefs. In this sense it is a method that focuses on beliefs about risk and danger rather than meta-cognitive beliefs about mental processes. However it would

seem likely that ego-syntonic obsessions will still respond to exposure treatment. It may be that as they are not viewed as senseless by the patient, it may take more work to gain treatment compliance and to encourage the patient to actually risk carrying out the exposure task and work on the overvalued ideas during the exposure program may be of considerable benefit.

It seems clear that the cognitive model of OCD is far from complete and future work on obsessions and intrusive thoughts would be of great value. One conceptual issue that should be addressed is the mental status of obsessions and intrusive thoughts.

Intrusive thought approaches to obsessions (Rachman and de Silva 1978; Salkovskis, 1985) treat obsessions as transitory mental events. The intrusive thought occurs in time, is reacted to, appraised, and gives rise to NATs and the associated distress and neutralising behaviour. But the contamination obsessions described as Type 3 in this thesis, seem much more like belief states. They persist over time, may be activated by triggering stimulus in the environment (e.g. the sight of dirt) and fit in some ways with the rest of the person's belief system. It seems likely that these phenomenological differences are of considerable importance in understanding the differing cognitive mechanisms that underlie each type.

In conclusion, the existence of ego-syntonic obsessions has been explored, with significance evidence that the appraisal of obsessions as ego-syntonic is highly related to obsessionality. The arbitrary insistence that all obsessions be experienced as ego-dystonic is not supported by the empirical evidence.

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Appendix A

Below is a list of thoughts that might be experienced by someone with obsessive compulsive disorder. Please rate each thought according to how typical you think it is of obsessive compulsive disorder.

		1= rare	3= quite common	5= very common		
1	Pushing a stranger in front of a train, subway or car	1	2	3	4	5
2	Hurting defenceless children or animals	1	2	3	4	5
3	Driving into pedestrians or animals	1	2	3	4	5
4	Kicking, pushing or otherwise hurting complete strangers	1	2	3	4	5
5	Jumping in front of a train, subway or car	1	2	3	4	5
6	I think about harming myself	1	2	3	4	5
7	When I see a sharp object (knife, razor, scissors, etc.) I think of slitting my wrist or throat	1	2	3	4	5
8	Images of death or horrible events	1	2	3	4	5
9	Saying something rude to or insulting a stranger	1	2	3	4	5
10	I fear blurting out obscenities or insults	1	2	3	4	5
11	That the fly of my pants is unzipped or that my blouse is unbuttoned	1	2	3	4	5
12	Having sex in a public place	1	2	3	4	5
13	People I come in contact with being naked	1	2	3	4	5
14	Authority figures (vicar, boss, bank manager) being naked	1	2	3	4	5
15	Accidentally belching or "breaking wind" loudly in public	1	2	3	4	5
16	Blurting out obscenities in public	1	2	3	4	5
17	Throwing something at the a public speaker	1	2	3	4	5
18	Picking something up and throwing it through a window	1	2	3	4	5
19	I sometimes feel the need to break or damage things for no reason	1	2	3	4	5

20	Grabbing the money out of a cashier's till when purchasing an item	1	2	3	4	5
21	Holding up the bank teller while doing routine banking	1	2	3	4	5
22	Shoplifting or stealing something even though I don't really want it	1	2	3	4	5
23	If I don't do things just right, something bad will happen to my friends or family	1	2	3	4	5
24	I left the door of the house unlocked and there is an intruder inside	1	2	3	4	5
25	I left the heat, stove or lights on in the house which may cause a fire	1	2	3	4	5
26	I left the water taps running in the house which may cause a flood	1	2	3	4	5
27	Thinking that bodily secretions are dangerous	1	2	3	4	5
28	I think contact with bodily secretions (perspiration, saliva, urine etc.) may contaminate my clothes or somehow harm me	1	2	3	4	5
29	I am bothered by thoughts that I may have sticky substances or residues on my hands	1	2	3	4	5
30	I will become dirty or contaminated, by touching public door-knobs	1	2	3	4	5
31	I think my hands are dirty after reading a newspaper	1	2	3	4	5
32	I think my hands are dirty after touching money	1	2	3	4	5
33	I will become contaminated with germs by using public facilities (telephone, toilets etc.)	1	2	3	4	5
34	I will be contaminated by environmental pollution	1	2	3	4	5
35	I am concerned about environmental contamination (e.g. radiation, asbestos)	1	2	3	4	5
36	Thinking I have to wash after touching animals	1	2	3	4	5
37	I am going to catch a disease from touching a toilet seat or tap	1	2	3	4	5
38	I avoid public toilets because I am afraid of disease and contamination	1	2	3	4	5
39	I will contract a fatal disease from touching things strangers have touched	1	2	3	4	5
40	I will transmit a fatal disease by using public facilities	1	2	3	4	5
41	Having sex with a person who has authority over me (vicar, boss)	1	2	3	4	5
42	Having sex with a person who I would never want to have sex with	1	2	3	4	5

43	Fear of molesting a child, despite no desire to do so	1	2	3	4	5
44	I have perverse sexual thoughts, images and impulses	1	2	3	4	5
45	Thoughts of engaging in a sexual act that I would find completely disgusting	1	2	3	4	5
46	Thoughts of engaging in sexual activity that goes against my sexual preference (e.g., homosexual, heterosexual)	1	2	3	4	5
47	Lifting my skirt or dropping my pants, thereby indecently exposing myself	1	2	3	4	5
48	Thinking I have to hang on to useless objects	1	2	3	4	5
49	Thinking I need to collect certain things	1	2	3	4	5
50	I am very concerned about hoarding things	1	2	3	4	5
51	Thinking I might be throwing something away by mistake	1	2	3	4	5
52	I think I need to inspect the rubbish before throwing it out in case I am throwing something away by mistake	1	2	3	4	5
53	I have thoughts about losing things	1	2	3	4	5
54	I might have said something blasphemous	1	2	3	4	5
55	Thinking I must check particular objects and furniture are always in the same position	1	2	3	4	5
56	I am very concerned with the need for exactness and symmetry	1	2	3	4	5
57	Thinking I need to align objects "just so"	1	2	3	4	5
58	Thoughts about things not being symmetrical	1	2	3	4	5
59	Thinking that things may not be in order before I leave the house	1	2	3	4	5
60	Thoughts about having to do routine activities in a particular order or a certain number of times	1	2	3	4	5
61	I often have thoughts about doing things perfectly and exactly	1	2	3	4	5
62	I have thoughts about needing to re-open envelopes before sending them	1	2	3	4	5
63	I have doubts that make me re-check forms, documents, cheques etc., to make sure I have filled them in correctly	1	2	3	4	5

SPECIAL NOTE

**This item is tightly bound
and while every effort has
been made to reproduce the
centres force would result
in damage.**

Appendix B

OTAS

Below are a selection of the thoughts that many people report having pop into their minds from time to time. On the form rate each thought on the 1 - 5 scale, by circling one of the numbers, on how you feel about thinking it. The first line includes an example to give you the idea of how to fill in the form.

	How often do you have this thought <i>1: at least 1 a day</i> <i>2: at least 1 a week</i> <i>3: at least 1 a month</i> <i>4: at least 1 per year</i> <i>5: less than 1 per year</i>	This is a distressing thought <i>1= strongly disagree</i> <i>2= moderately disagree</i> <i>3= uncertain</i> <i>4= moderately agree</i> <i>5= strongly agree</i>	This is likely to happen/come true <i>1= strongly disagree</i> <i>2= moderately disagree</i> <i>3= uncertain</i> <i>4= moderately agree</i> <i>5= strongly agree</i>	Thinking this keeps me safe <i>1= strongly disagree</i> <i>2= moderately disagree</i> <i>3= uncertain</i> <i>4= moderately agree</i> <i>5= strongly agree</i>	Thinking this is senseless/irrational <i>1= strongly disagree</i> <i>2= moderately disagree</i> <i>3= uncertain</i> <i>4= moderately agree</i> <i>5= strongly agree</i>
<i>Example: Jumping a red light</i>	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
1. I left the heat, stove or lights on in the house which may cause a fire	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
2. I might jump in front of a train, subway, or car	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3. I will become dirty or contaminated, by touching public door-knobs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
4. Saying something rude to or insulting a stranger	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5. Blurting out obscenities in public	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6. Shoplifting or stealing something even though I don't really want it	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7. If I don't do things just right, something bad will happen to my friends or family	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8. I might drive into pedestrians or animals	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9. I think contact with bodily secretions (perspiration, saliva, urine etc.) may contaminate my clothes or somehow harm me	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10. Images of death or horrible events	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
11. I will be contaminated by environmental pollution	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

	How often do you have this thought <i>1: at least 1 a day</i> <i>2: at least 1 a week</i> <i>3: at least 1 a month</i> <i>4: at least 1 per year</i> <i>5: less than 1 per year</i>	This is a distressing thought 1= strongly disagree 2= moderately disagree 3= uncertain 4= moderately agree 5= strongly agree	This is likely to happen/come true 1= strongly disagree 2= moderately disagree 3= uncertain 4= moderately agree 5= strongly agree	Thinking this keeps me safe 1= strongly disagree 2= moderately disagree 3= uncertain 4= moderately agree 5= strongly agree	Thinking this is senseless/irrational 1= strongly disagree 2= moderately disagree 3= uncertain 4= moderately agree 5= strongly agree
12. Thinking I have to wash after touching animals	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
13. I am going to catch a disease from touching a toilet seat or tap	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
14. I will transmit a fatal disease by using public facilities	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
15. Having sex with a person who I would never want to have sex with	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
16. Fear of molesting a child, despite no desire to do so	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
17. I have perverse sexual thoughts, images and impulses	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
18. Thoughts of engaging in sexual activity that goes against my sexual preference	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
19. Lifting my skirt or dropping my pants, thereby indecently exposing myself	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
20. Thinking I need to collect certain things	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
21. I think I need to inspect the rubbish before throwing it out in case I am throwing something away by mistake	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
22. I might have said something blasphemous	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
23. Thinking I must check particular objects and furniture are always in the same position	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
24. I have doubts that make me re-check forms, documents, cheques etc., to make sure I have filled them in correctly	1 2 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Appendix C : Obsessive Compulsive Inventory

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

0 =Never 1 = Almost Never 2 = Sometimes 3 = Often 4 = Almost Always

in the column labeled **DISTRESS**, **CIRCLE** the number that best describes **HOW MUCH** that experience has **BOtherED Or BOTHERED YOU DURING THE PAST MONTH**. The numbers in this column refer to the following verbal

0 =Never 1 = Almost Never 2 = Sometimes 3 = Often 4 = Almost Always

	Frequency					Distress				
	0	1	2	3	4	0	1	2	3	4
I have 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
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
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
I wash and clean obsessively.	0	1	2	3	4	0	1	2	3	4
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
I have saved up so many things that they get in the way.	0	1	2	3	4	0	1	2	3	4
I check things more often than necessary.	0	1	2	3	4	0	1	2	3	4
I avoid using public toilets because I am afraid of disease or contamination.	0	1	2	3	4	0	1	2	3	4
I repeatedly check doors, windows, drawers etc.	0	1	2	3	4	0	1	2	3	4
I repeatedly check gas and water taps and light switches after turning them off.	0	1	2	3	4	0	1	2	3	4
I collect things I don't need.	0	1	2	3	4	0	1	2	3	4
I have thoughts of having hurt someone without knowing it.	0	1	2	3	4	0	1	2	3	4
I have thoughts that I might want to harm myself or others.	0	1	2	3	4	0	1	2	3	4
I get upset if objects are not arranged properly.	0	1	2	3	4	0	1	2	3	4
I feel obliged to follow a particular order in dressing, undressing and washing myself.	0	1	2	3	4	0	1	2	3	4
I feel compelled to count while I am doing things.	0	1	2	3	4	0	1	2	3	4
I am afraid of impulsively doing embarrassing or harmful things.	0	1	2	3	4	0	1	2	3	4
I need to pray to cancel bad thoughts or feelings.	0	1	2	3	4	0	1	2	3	4
I keep on checking forms or other things I have written.	0	1	2	3	4	0	1	2	3	4
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
I am excessively concerned about cleanliness.	0	1	2	3	4	0	1	2	3	4
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

Appendix D

Demographics sheet

AGE:

SEX: M / F (delete as appropriate)

Appendix E

Investigating obsessive-compulsive disorder

Volunteers are sought for a research project investigating obsessive-compulsive disorder. We would be interested to hear from you if you have ever been diagnosed with this problem, or feel that obsessions and rituals have been a significant difficulty for you.

Purpose of the study

The aim of this study is to get a better idea of how people experience obsessive thoughts, for instance how often they occur and how people feel about having them. This is particularly important in the treatment of obsessive-compulsive disorder.

What happens if I decide to take part?

You will be sent an information leaflet, questionnaire pack, and stamped addressed envelope in which to return the completed questionnaires. They take around twenty minutes to fill in. Then pop them in the post back to us. That's all there is to it.

Will my taking part in this study be kept confidential?

All information collected in the course of this study will be kept strictly confidential. The questionnaires do not ask for any identifying information.

What if I want to know the results of the study?

A brief summary of the results of this study will be made available to interested participants and will be reported in this newsletter.

Who has reviewed the study?

This study has been reviewed and approved by both the University of Leicester Clinical Psychology Research Committee and the Southern Derbyshire Local Research Ethics Committee.

How to take part

If you would like to take part you can do so by providing us with your name and address so that we can send you a questionnaire pack. There are three ways to let us know you would like to take part:

Telephone: Christian Ryan, Clinical Psychologist in training on 01332 207283

Write to: Christian Ryan
Cognitive Behavioural Psychotherapy Unit
Rykneld
Off Bedford Street
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Thanks very much.

Appendix F

PATIENT INFORMATION SHEET

Title of Project: The content and experience of repetitive thoughts in people from the normal population and in patients with obsessive-compulsive disorder

You are being invited to take part in a research study. This sheet will give you some information about what is involved, so as to help you decide whether or not you wish to take part. Once you have read it, feel free to discuss it with your friends and relatives if you wish. Take the time to decide whether or not you wish to take part.

Purpose of the study

The aim of this study is to get a better idea of how people experience repetitive thoughts, for instance how often they occur and how people feel about having them. This is particularly important in the treatment of obsessive-compulsive disorder, as it may help us decide in the future which treatments are the most useful for which patients.

Do I have to take part?

Taking part in this research is entirely up to you. Your treatment will not be affected in any way should you choose to take part or not. If you agree to take part you will be given a consent form to sign. If you decide to withdraw at any time you are free to do so. You will be given this information sheet to keep and a copy of the consent form you have signed.

What will happen if I take part?

You will be given a questionnaire booklet to fill in, which should not take more than about 30 minutes to complete. You will also be given a stamped addressed envelope in which to return the questionnaire when you are ready. That's all there is to it.

Will my taking part in this study be kept confidential?

All information collected in the course of this study will be kept strictly confidential. Returned questionnaires will be given a number for use in the study and any identifying details will be removed.

What if I want to know the results of the study?

A brief summary of the results of this study will be made available to interested participants, furthermore it is hoped that the results will be published more widely in the academic literature.

Who has reviewed the study?

This study has been reviewed and approved by both the University of Leicester Clinical Psychology Research Committee and the Southern Derbyshire Local Research Ethics Committee.

Contact for further information

If you have any queries about this study, you can contact the Christian Ryan at (Telephone number to be supplied nearer the time).

Thank you for taking part.

If you have any questions or concerns about this study, you should discuss them with the researcher leading the study. If you have any concern about the way this study is being conducted, you are welcome to contact the Chairman of Southern Derbyshire Local Research Ethics Committee via the committee's administrator, Jill Marshall (tel: 01332 626300 ext 6420).

Appendix G

(Actual forms printed on Southern Derbyshire Mental Health Trust headed paper).

Study Number: SDLREC : 0008/225

Patient Identification Number for this trial:

CONSENT FORM

Title of Project: A questionnaire study into whether obsessions are always unwanted intrusive thoughts

Name of Researcher: Christian Ryan

Please tick boxes

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.
3. I understand that my behaviour therapy notes will be looked at only to obtain my Hospital Anxiety and Depression score. I give permission for the principal researcher to have access to my records for this purpose.
4. I agree to take part in the above study.

Name of Patient

Date

Signature

Christian Ryan
Researcher

23/1/00
Date

Signature

Sign both copies; keep one for yourself
return the other with the questionnaire