

Volume 1

**‘Responsibility Insight’ in
Obsessive Compulsive Disorder**

**Submitted for the degree of
Doctorate in Clinical Psychology**

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Contents

LISTS OF TABLES AND FIGURES	3
ABSTRACT	4
ACKNOWLEDGEMENTS	5
CHAPTER 1. INTRODUCTION	6
1.1 OVERVIEW.....	6
1.2 DIAGNOSIS, CLINICAL FEATURES AND MEASUREMENT OF OCD	6
1.3 FROM BEHAVIOURAL TO COGNITIVE MODELS OF OCD	9
1.4 INFLATED RESPONSIBILITY IN OCD.....	12
1.5 OTHER BELIEFS IN OCD.....	21
1.6 INSIGHT IN OCD.....	24
1.7 RESPONSIBILITY INSIGHT	28
1.8 HYPOTHESES	30
CHAPTER 2. METHOD	33
2.1 OVERVIEW.....	33
2.2 PARTICIPANTS	33
2.3 SELF COMPARED TO OTHERS REACTIONS TO EVENTS SCALE (SCORES)	36
2.4 OTHER MEASURES	45
2.5 PROCEDURE.....	48
CHAPTER 3. RESULTS	51
3.1 OVERVIEW.....	51
3.2 OCD GROUP DESCRIPTIVES.....	51
3.3 TESTS OF MAIN HYPOTHESES.....	57
3.4 TESTS OF SUBSIDIARY HYPOTHESES.....	67
CHAPTER 4. DISCUSSION	70
4.1 SUMMARY OF FINDINGS	70
4.2 INTERPRETATIONS OF FINDINGS	71
4.3 IMPLICATIONS FOR MODELS AND TREATMENT.....	89
4.4 LIMITATIONS OF THE STUDY.....	91
4.5 POSSIBLE FUTURE INVESTIGATION.....	93
4.6 CONCLUSIONS	96
REFERENCES	98
APPENDICES	105
A.1 DIAGNOSTIC CRITERIA FOR OCD (DSM-IV)	105
A.2 INFORMATION SHEETS AND CONSENT FORMS	107
A.3 ETHICAL APPROVAL LETTERS	112
A.4 SELF COMPARED TO OTHERS REACTIONS TO EVENTS SCALE (SCORES)	116

Lists of Tables and Figures

List of Tables

<i>Table 1.1</i>	Examples of beliefs taken from the OBQ in each of the six domains.....	22
<i>Table 2.1</i>	Age, sex, education of OCD and matched control participants.	36
<i>Table 2.2</i>	Six hypothetical scenarios employed in the SCORES	38
<i>Table 3.1</i>	Belief ratings on the six subscales of the OBQ.	55
<i>Table 3.2</i>	Post-hoc ‘Self-Other’ comparisons on six reactions of the SCORES.....	59
<i>Table 3.3</i>	Regression analyses on severity (YBOCS), with independent variables of responsibility (OBQ-R, SELF-RESP), anxiety and depression.	63
<i>Table 3.4</i>	Regression analyses on severity (YBOCS), with independent variables of responsibility (OBQ-R), responsibility insight (OTHERS-RESP) and anxiety.	66
<i>Table 3.5</i>	Correlations between severity measures (YBOCS, MOCI), anxiety, responsibility measures (OBQ-R, SELF-RESP), and responsibility insight measures (OTHERS-RESP, Others Beliefs).	67
<i>Table 3.6</i>	Summary of comparisons between ‘therapy’ and ‘non-therapy’ subgroups.....	68

List of Figures

<i>Figure 1.1</i>	Cognitive model of Obsessive Compulsive Disorder (from Salkovskis, Forrester & Richards, 1998).....	13
<i>Figure 1.2</i>	Responsibility beliefs in controls, anxious controls and obsessionals, measured on the OBQ-R (OCCWG, 2001).....	16
<i>Figure 2.1</i>	Interpretation of SELF-RESP (X) and OTHERS-RESP (O) ratings	42
<i>Figure 3.1</i>	Histogram depicting scores on the YBOCS measure of total severity.....	52
<i>Figure 3.2</i>	Histogram depicting scores on the MOCI measure of total severity.	53
<i>Figure 3.3</i>	Histogram depicting scores on the OBQ-R.	56
<i>Figure 3.4</i>	Average SELF-RESP and OTHERS-RESP ratings on the SCORES.....	58
<i>Figure 3.5</i>	Average ‘Self’ and ‘Other’ Responsibility Belief Ratings on the OBQ. .	60
<i>Figure 4.1</i>	Possible action of responsibility insight on responsibility and severity...	78

Abstract

Aim. Cognitive models have proposed that inflated responsibility for harm plays a central role in Obsessive Compulsive Disorder (OCD) (Salkovskis, 1985, 1989). This study aimed to explore the concept of *'responsibility insight'*, i.e. the awareness in people with OCD of the idiosyncrasy of their own responsibility biases. This concept had not previously been addressed.

Methods. 32 adults with OCD participated. Two approaches were taken, each involving ratings for 'oneself' and 'others' (i.e. "*How would the average person in the street react?*") First, a new scale was developed, the Self Compared to Others Reactions to Events Scale (SCORES), employing hypothetical scenarios with a theme of responsibility for harm. Second, direct belief ratings were obtained on a variety of responsibility beliefs, taken from the Obsessive Beliefs Questionnaire (OBQ; OCCWG, 2001). Matched control participants contributed to the validation process.

Results. On average, the OCD group demonstrated good evidence of responsibility insight. Consistent with previous studies, responsibility predicted severity of OCD. Moreover, on the SCORES, poor responsibility *insight* was also predictive of greater severity of OCD. Furthermore, this association was independent of responsibility levels. However, this finding was not paralleled using the belief ratings approach. Methodological problems may account for this, including effects of response bias. It was also found, contrary to expectation, that a subgroup who had experience of therapy scored significantly lower on responsibility insight on the SCORES.

Conclusions. Poor responsibility insight may predict severity of OCD independently of responsibility, although more research is needed. One explanation is that obsessive individuals can use their specific insight to partially ameliorate their difficulties by employing strategies such as cognitive self-talk. Some methodological refinement is suggested for future research. Also, the maintenance of responsibility beliefs despite good responsibility insight deserves exploration. It is argued that responsibility insight, not previously studied, may have a significant bearing on both models and treatment of the disorder.

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Chapter 1. Introduction

1.1 Overview

Recent years have seen an expansion in cognitive research into Obsessive Compulsive Disorder (OCD). This has included more sophisticated modelling of the disorder, together with the development of theory-driven interventions aimed at helping the considerable number of sufferers who fail to respond adequately to more traditional treatments. This chapter will begin by setting out the diagnosis and main clinical features of OCD. Then a brief account will be given of the development of cognitive models from a traditionally behavioural framework. The concept of inflated responsibility will then be considered, with a brief account of the growing evidence to confirm its relevance in understanding OCD. Insight in OCD will then be discussed, leading to the definition of a new construct, *responsibility insight*, which has not as yet been studied explicitly. Finally, the major hypotheses arising from these ideas are set out, which form the subject of investigation in this thesis.

1.2 Diagnosis, Clinical Features and Measurement of OCD

1.2.1 *Diagnosis of OCD*

Obsessive-Compulsive Disorder (OCD) is defined in DSM-IV (APA, 1994) by the occurrence of either or both obsessions or compulsions that are time consuming (take upwards of an hour a day) or cause significant distress or impairment. Obsessions are defined as recurrent intrusive thoughts, impulses or images, that are not simply excessive worries about real-life problems, and that the person attempts to ignore,

suppress or neutralise. Compulsions are repetitive behaviours, either overt (e.g. hand washing, checking, ordering) or covert (e.g. praying, counting, repeating words silently) which the person feels driven to perform in response to an obsession, or according to rigid rules. It is also required that the person recognises, at some time during the course of the disorder, that the obsessions or compulsions are excessive or unreasonable. Estimates of lifetime prevalence of OCD vary between 1.9-3.3% (Karno et al, 1988; Samuels & Nestadt, 1997; Bebbington, 1998). The full DSM-IV criteria for Obsessive-Compulsive Disorder are provided in Appendix 1.

1.2.2 Clinical Features

Obsessions typically centre around themes of doubting (e.g. "*Did I remember to switch off the gas?*"), contamination (e.g. "*I have a contagious disease*"), aggression (e.g. "*I might harm my baby*"), blasphemy (e.g. impulses to shout obscenities in church) and sexual imagery (e.g. recurrent pornographic images). Sufferers have variously described these obsessions as immoral, sinful, disgusting, dangerous, threatening, alarming, predictive, insane, bewildering and criminal (Rachman, 1997). The relative frequency of these different forms of obsession (thoughts, images, impulses) is not well established, with some arguing that prevalence of imagery is underestimated (de Silva, 1986). The most frequent categories of overt compulsive behaviour are checking and washing, and many suffer from multiple rituals (Rachman & Hodgson, 1980). These rituals may involve an elaborate, time-consuming and distressing sequence of repetitive actions which must be followed perfectly or become invalid and have to be repeated. Emmelkamp (1987) found that around 80% of those with OCD have both obsessions *and* compulsions, although the Epidemiological Catchment Area survey put the figure much lower, at 8.6%, with the majority having

either obsessions (55%) *or* compulsions (53.4%) (Karno et al, 1988). This may in part reflect the differences between clinical and non-clinical samples.

OCD is approximately equally represented in males and females, although some community studies report an increased prevalence in women (Bebbington, 1998). OCD typically develops in late adolescence or early adulthood, with a mean age of onset around 22-23 (Karno et al, 1988). Some studies suggest an earlier onset in men (Rasmussen & Eisen, 1989), but these findings are inconsistent, and are naturally prone to the difficulties inherent in retrospective recall. Relatively little is understood about the aetiology of the disorder, although a genetic component is probable (Samuels & Nestadt, 1997), and there are some as yet untested cognitive hypotheses (Salkovskis, Shafran, Rachman & Freeston, 1999). These include a variety of early predisposing factors, such as the development of a broad sense of responsibility, rigid and extreme codes of conduct and duty, and specific incidents which involved the actual or apparent causal link between the individual's thoughts or actions and a critical negative event. The current lack of longitudinal prospective studies makes such hypotheses problematic to verify, and a challenge for future research. In a small number of cases, a traumatic event may lead to the onset of OCD (e.g. de Silva & Marks, 1999). Comorbidity with depression is frequently observed (Karno et al, 1988), and there is some comorbidity with other anxiety disorders and personality disorders.

1.2.3 Measurement of OCD

The reliable measurement of obsessions and compulsions is vital for empirical research into OCD, as well as for detecting treatment effects in therapy. A variety of

different measures have emerged, including behavioural observation, self-report inventories and observer-rated scales. A critique of all such measures is beyond the scope of this thesis (for a review, see Taylor, 1995). All measures have their strengths and weaknesses. For example, the Maudsley Obsessive Compulsive Inventory (MOCI; Hodgson & Rachman, 1977) is a 30-item self-report scale assessing overt rituals and related obsessional concerns. Items are answered as true or false, such as *"I spend a lot of time every day checking things over and over again"*. The MOCI yields a total obsessional score and four subscales, washing, checking, slowness/repetition and doubting/conscientiousness. It is quick and reasonably reliable but suffers in poor coverage of covert rituals and rumination. Some of these problems have been overcome in the Obsessive Compulsive Inventory (OCI; Foa et al, 1998). The Yale-Brown Obsessive Compulsive Scale (YBOCS; Goodman et al, 1989a, 1989b) is an observer-rated scale designed to measure severity independently of symptom content. After eliciting the major symptoms using a standard checklist, the obsessions and compulsions are separately rated by the administrator on dimensions of duration/frequency, interference, associated distress, degree of resistance, and perceived control, using a 10-point scale. In a review, Taylor (1995) found the YBOCS to be the best available instrument for measuring OCD in terms of reliability, validity and sensitivity to treatment effects, although it is more time-consuming to administer.

1.3 From Behavioural to Cognitive Models of OCD

The formulation and treatment of Obsessive Compulsive Disorder (OCD) has for over twenty years been dominated by a behavioural model, which arose out of a classic series of experimental patient studies in the 1970's demonstrating an anxiety

reduction associated with the execution of compulsions, and in addition the spontaneous decay of the compulsive urge when the act was prevented (Rachman, de Silva & Roper, 1976). Treatment of choice for OCD became known as ‘exposure and response prevention’ (Rachman & Hodgson, 1980) and this has met with fair outcome success.

However, several factors have led to the beginnings of a cognitive remodelling of OCD in recent years. Firstly, obsessions are by definition unwanted intrusive thoughts, images or impulses, which are essentially cognitive phenomena (Salkovskis, 1985). Furthermore, experimental research has repeatedly demonstrated that intrusions occur in around 90% of the normal population and the content and form is indistinguishable from that of clinical intrusions (Rachman & De Silva, 1978; Salkovskis & Harrison, 1984). What differs in OCD is that the intrusions are reported as more frequent, longer-lasting, and causing a greater degree of interference and subjective distress.

In line with Beck’s (1976) cognitive theories of the emotional disorders, attention therefore turned to the individual’s *interpretation* of the intrusions (rather than the content) as being the key to differentiating clinical from non-clinical examples (Salkovskis, 1985; Rachman, 1997). For example, an intrusion might be “*Did I remember to switch off the gas?*” and the appraisal might be “*If I don’t check the gas the house might explode and I would be responsible for my family dying*”. Indeed, this distinction between intrusion and appraisal of intrusion is fundamental to most cognitive theories of OCD. Normal intrusive phenomena are therefore seen as the raw material for clinical obsessions. Furthermore, an individual’s underlying beliefs

(or assumptions) may be another important level of cognition to investigate (Obsessive Compulsive Cognitions Working Group, 1997). These are hypothesised to reflect more stable and enduring attitudes, which are manifest in a tendency to interpret or react to situations in a particular way (e.g. "*I must keep control of my thoughts at all times*"). It is noted that in Beck's cognitive theory, a further distinction is made between 'beliefs' and 'assumptions', the former representing unconditional 'truths' (e.g. "*I'm worthless*") and the latter being conditional propositions (e.g. "*If I have a bad thought then I am bad*"). However, in the OCD literature, this distinction is not generally made, and the terms 'belief', 'assumption' and 'attitude' are often used interchangeably to refer to this level of cognition.

Rachman (1997, 1998) expands upon this cognitive framework, and claims that clinical obsessions are caused by a catastrophic misinterpretation of the significance of one's intrusive thoughts (or images or impulses). This theory is modelled explicitly upon the core structure in Clark's (1986) model of panic, in which a catastrophic misinterpretation of bodily sensations is deemed to account for an escalation of the anxiety which caused them, creating a spiral of panic. Rachman suggests that the 'significance' of the intrusive thought involves the idea that it is meaningful, revealing about the self, important, has potential serious consequences, and necessitates action to stop such thoughts occurring and to avoid acting on the thought. It follows that the weakening of such misinterpretations will cause the frequency and persistence of the obsessions to diminish. Whether Rachman's criteria for the 'significance' of intrusions are necessary and/or sufficient is an empirical question, and detailed analysis of the interpretation of intrusions in OCD is the subject of ongoing investigation (Obsessive Compulsive Cognitions Working Group, 1997).

Meanwhile, a specific model has been proposed (Salkovskis, 1985, 1989), consistent with this framework, but emphasising a significance centred upon the notion of personal responsibility. This will be addressed next.

1.4 Inflated responsibility in OCD

1.4.1 The Responsibility Model (Salkovskis, 1985, 1989)

Salkovskis (1985, 1989) has offered a highly influential cognitive model of OCD. According to his model, the occurrence and/or content of the intrusions are interpreted in a way which indicates that the person may be, may have been, or may come to be responsible for harm to themselves or others. For example, a woman with OCD who has an intrusive image of strangling her child may interpret this image as evidence that she is at imminent risk of harming her child unless she takes steps to prevent this occurring. The tendency to generate such 'responsibility interpretations' is thought to stem from enduring assumptions, or beliefs which are learned from early experiences and/or activated by critical incidents. Such interpretations lead to increased discomfort, anxiety and depression, and heighten attention bias towards the intrusions themselves. Furthermore, they provide motivation to engage in 'safety strategies' and neutralising behaviour, including attempts to suppress the intrusion, avoidance of particular settings or situations (e.g. being left alone with the child), reassurance-seeking and mental or behavioural ritual. However, these effects lead to an increase in salience and probability of future intrusions, and the rituals may prevent disconfirmation of the person's negative beliefs. A maintenance cycle of perceived threat, discomfort, perception of responsibility, and neutralising behaviour is therefore established. A schematic representation of the model is shown in Figure 1.1 below.

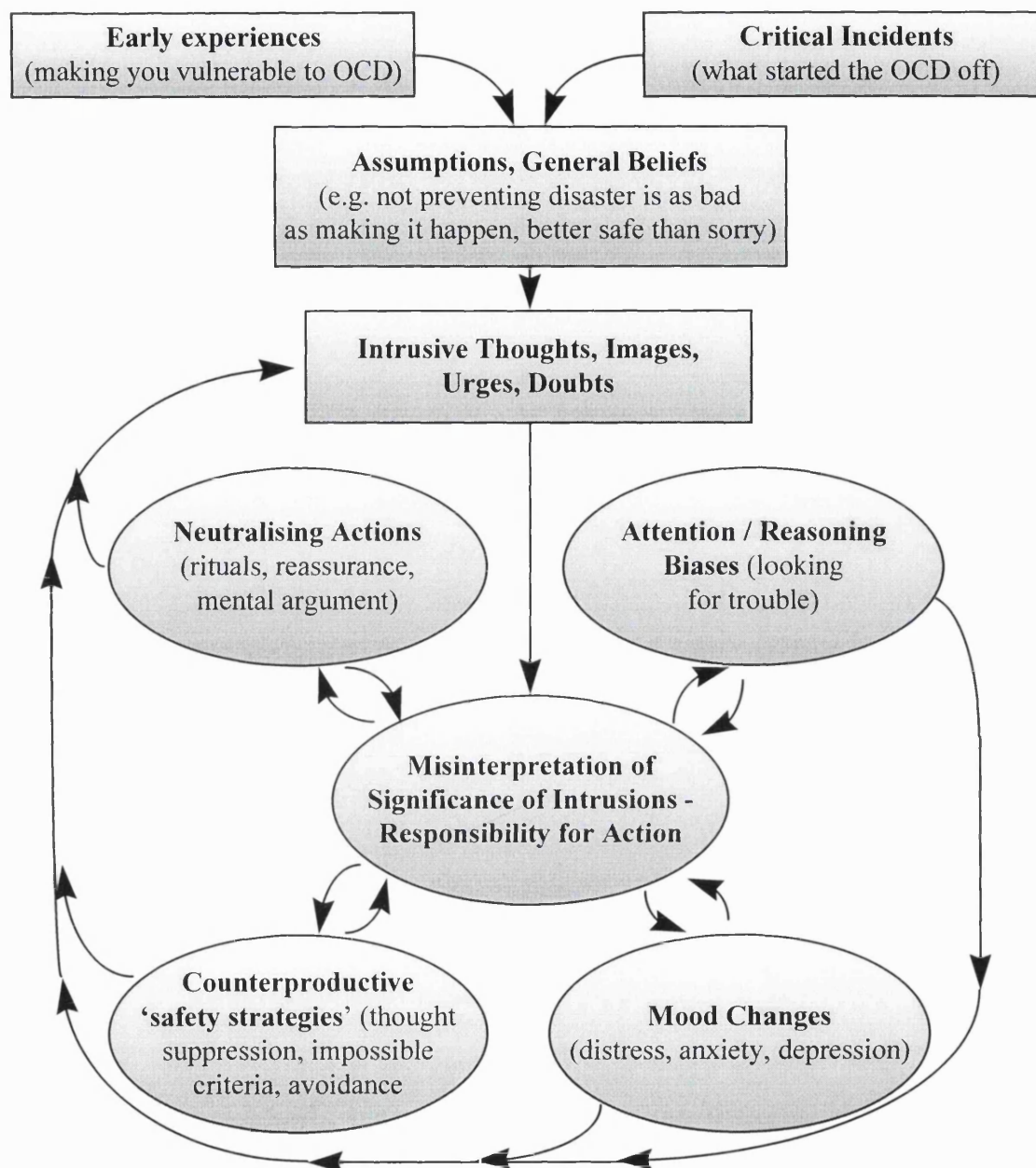


Figure 1.1 Cognitive model of Obsessive Compulsive Disorder (from Salkovskis, Forrester & Richards, 1998)

Responsibility has been noted as a distinctive feature in obsessionals for some time (e.g. McFall & Wollersheim, 1979), but Salkovskis's model is distinct in assigning inflated responsibility a primary role. However, several authors have noted the importance of defining responsibility precisely before empirical investigation can proceed unambiguously. Salkovskis (1996) has therefore defined responsibility in the

context of OCD as *“The belief that one has the power which is pivotal to bring about or prevent subjectively crucial negative outcomes. These outcomes are perceived as essential to prevent. They may be actual, that is, having consequences in the real world, and/or at a moral level”*.

An earlier version of this definition was evaluated by Rheume, Ladouceur, Freeston & Letarte (1995), who presented 397 students with a variety of ambiguous scenarios based on major OCD themes including doubting, contamination and making errors. Participants were asked to construct a negative outcome, and then rate the scenario on four dimensions of probability, severity of outcome, influence and pivotal influence. Perceived responsibility and personal relevance were also rated. Influence and pivotal influence were the best predictors of perceived responsibility, whereas probability and severity of outcome were not substantial predictors. However, a supplementary study showed some evidence for perceptions of responsibility being affected by the rating process itself. When the order of administration was reversed, with responsibility ratings first, the role of pivotal influence diminished, although it still remained the best predictor. This study therefore broadly supports the notion of responsibility being defined in terms of the belief in pivotal power to influence negative outcomes.

Rachman, Thordarson, Shafran & Woody (1995) also identified the need for a clarification of the responsibility construct, and devised the Responsibility Appraisal Questionnaire (RAQ), in which respondents endorse statements on a visual analogue scale such as “When driving, it is up to me to ensure my passengers are wearing seat belts”. Items covered the domains of responsibility for property damage, responsibility for physical harm coming to others, responsibility in social contexts,

positive outlooks on responsibility, and thought-action fusion (TAF), the belief that thoughts are nearly equivalent to actions, either in reality or morally (Rachman, 1993). The RAQ was given to 291 students and factor analysis revealed four responsibility dimensions that centred upon harm, social responsibility, positive responsibility and thought-action fusion. A subsequent analysis demonstrated that of these four, only the TAF subscale was significantly correlated with obsessionality scores, measured on the MOCI and the Inventory of Beliefs Related to Obsessionality (IBRO; Freeston et al, 1993). This study was therefore useful in confirming the complexity of the responsibility concept, although the weak associations with obsessionality are hard to interpret because the ‘pivotal influence’ factor was absent from the authors’ conception of responsibility.

1.4.2 Evidence Supporting the Responsibility Model

Several studies have demonstrated an association of responsibility beliefs with obsessional symptoms, based on self-report questionnaires (OCCWG, 2001; Salkovskis et al, 2000; Freeston, Ladouceur, Gagnon & Thibodeau, 1993; Steketee, Frost & Cohen, 1998). For example, Salkovskis et al (2000) produced two self-report instruments, the Responsibility Attitude Scale (RAS), aiming to detect underlying responsibility schemata, and the Responsibility Interpretations Questionnaire (RIQ), to measure the frequency of and belief in specific interpretations of intrusive thoughts about harm. Both scales reliably differentiated obsessionals from anxious and non-clinical controls, and both scales were found to provide an independent contribution to the measures of obsessional symptoms. The Obsessive Compulsive Cognitions Working Group (OCCWG, 2001) also found the responsibility subscale of their Obsessive Beliefs Questionnaire (OBQ) to differentiate OCDs from both community

controls and anxiety disordered controls (see Figure 1.2 below). Similar associations have been detected with non-clinical groups (e.g. Freeston et al, 1992), although there are some notable exceptions (Rachman et al, 1995). Broadly, the studies which adopt the 'pivotal influence' definition of responsibility seem to show a more specific association with obsessional symptoms.

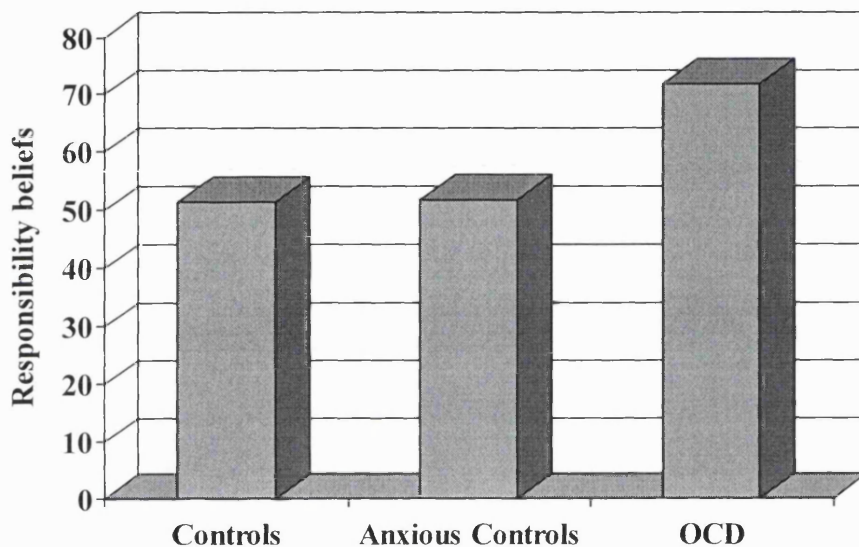


Figure 1.2 Responsibility beliefs in controls, anxious controls and obsessionals, measured on the OBQ-R (OCCWG, 2001).

A few experimental studies have attempted to test the *causal* status afforded to inflated responsibility in the Salkovskis model. Lopatka & Rachman (1995) conducted an experiment on 30 obsessional checkers, by the manipulation of perceived responsibility in the form of signed verbal contracts, between two administrations of a behavioural approach test. This test involved exposure to a situation in which they would normally check and the prevention of any checking response. A high responsibility condition involved participants agreeing to assume complete responsibility for the consequences of what would occur, and a low

responsibility condition involved the agreement to divest themselves of all responsibility. Results demonstrated not only that the responsibility manipulation successfully altered perception of responsibility, but that lowered responsibility caused a reduction in reported discomfort and urge to check. Oddly, *raised* responsibility did not produce statistically significant increases in the urge to check, but this may have been confounded by ceiling effects in the measurement. The same authors conducted a smaller study with obsessional cleaners which did not show a response to manipulation of responsibility. However, the sample size was small ($n=10$) and so the findings should be treated with caution.

Shafran (1997) employed a different responsibility manipulation based upon the clinical observation that obsessional participants show a temporary decrease in responsibility in the presence of a trusted other such as spouse, therapist or researcher (Rachman & Hodgson, 1980). The presence/absence of the investigator was thus manipulated, and Shafran found a significant increase in urge to neutralise in the high responsibility condition. Furthermore, her results applied equally to those with checking and non-checking compulsions, contrary to the Lopatka & Rachman (1995) finding.

In a non-clinical group of adults, Ladouceur et al (1995) conducted two experimental manipulations of responsibility to measure resultant checking behaviours. The first employed a sound recognition task, with responsibility induced by a bogus instruction that the participants were helping improve security for old and blind people crossing roads. The second study employed a timed 'pill classification' task, with responsibility again induced with an instruction that participants were contributing to

a better medication colouring system for a virus in South-East Asia. The manipulation of responsibility generated both increased anxiety and perception of responsibility in each study, but increased checking was only found in study two. This somewhat equivocal result may be attributable to a lack of power in manipulating responsibility, or a confound with task difficulty, both of which were addressed in study two. In general it provides partial support to the Salkovskis model.

1.4.3 Measurement of Responsibility

Assuming that responsibility plays an important role in OCD, its reliable measurement is important to further test and refine the cognitive model. Previously, measurement of responsibility has been hampered by an imprecise definition, and evidence is accruing that it should incorporate the notion of pivotal influence over negative events. In addition there is still some debate over the relevance of *generalised* responsibility attitudes, with some arguing that responsibility is more likely to be a situationally-specific entity, related to specific concerns (e.g. Rachman et al, 1995).

The main attempts to measure responsibility have been via self-report questionnaires. The Responsibility Attitude Scale and Responsibility Interpretations Questionnaire (RAS, RIQ; Salkovskis et al, 2000), mentioned earlier, were found to have good reliability and validity, and both contributed uniquely to the prediction of obsessionality. The Obsessive Compulsive Cognitions Working Group (1997, 2001) also developed two scales, the Obsessive Beliefs Questionnaire (OBQ) and the Interpretations of Intrusions Inventory (III). These scales address responsibility as

one of several domains thought to be relevant in OCD. Preliminary data show these scales to have good psychometric properties (OCCWG, 2001).

1.4.4 Treatment Implications

The responsibility model has various important implications for treatment, described by Salkovskis (1999). One aim is to raise the patient's awareness of the sequence of intrusion → evaluation → reactions to the evaluation. From these analyses, as well as the remainder of the assessment, formulation and discussion, Salkovskis argues, beliefs that centre upon inflated responsibility will be exposed. He notes that awareness of such beliefs may be helpful, although it may be insufficient to allow the individual to resist the attempt to neutralise. A further strategy is thus described, to counter dichotomous thinking such as "*Any influence over a harmful outcome means I am completely responsible for it*". This involves use of a pie chart to represent total responsibility for the event, and the patient is asked to compile a list of all possible contributions to 'responsibility', beginning with their own actions. Proportions of pie chart are then assigned to the component contributions (in reverse order so as to assign their own contribution last). This strategy aims to facilitate more moderated attributions of responsibility, thus raising awareness of their own inflated responsibility. Other techniques involve the challenging of dysfunctional assumptions, taken either directly from a responsibility belief questionnaire or from the assumptions elicited by use of a 'downward arrow' procedure (Burns, 1980; Wells, 1997). Again, the function is ultimately to raise awareness and facilitate a re-evaluation of the responsibility beliefs.

Although such approaches are promising, there is at present too little evidence to reach a conclusion on the efficacy of cognitive therapy for OCD. Van Oppen et al (1995) conducted a randomised trial of cognitive therapy versus exposure *in vivo* on 71 patients with obsessions and compulsions. The cognitive therapy was based largely on Beck's (1976) model, but specifically addressed the biases of overestimation of danger and inflated personal responsibility (van Oppen & Arntz, 1994). The authors found that a significantly higher proportion of patients in the cognitive therapy condition were rated as "recovered" following treatment, although when pre-treatment measures were controlled for, cognitive therapy was not, in itself, significantly more effective than the behavioural treatment. Freeston, Ladouceur, Gagnon et al (1997) also found a cognitive-behavioural approach successful in treating obsessional ruminators, a group often resistant to conventional behavioural techniques.

1.4.5 Summary

Inflated responsibility has been seen to play an important role in understanding OCD, with supporting evidence emerging from both psychometric and experimental research. Some findings support the existence both of underlying responsibility assumptions, and responsibility appraisals of intrusions in OCD. Such assumptions and appraisals appear to distinguish OCD from other clinical anxiety disorders.

1.5 Other Beliefs in OCD

1.5.1 *Belief Domains other than Responsibility*

Whilst Salkovskis (1985, 1989) has emphasised the part played by underlying beliefs about responsibility, a number of authors have suggested that other domains of idiosyncratic belief are relevant and worthy of detailed study (Clark & Purdon, 1993; Wells & Matthews, 1994; Obsessive Compulsive Cognitions Working Group, 1997). This latter international group of OCD experts collaborated to identify six major belief domains relevant to OCD (including responsibility), the others being over-importance of thoughts, excessive concern over controlling thoughts, overestimation of threat, intolerance of uncertainty, and perfectionism. The group has produced two new self-report instruments, the Obsessive Beliefs Questionnaire (OBQ) and the Interpretations of Intrusions Inventory (III). The OBQ consists of 87 items, rated on a 7-point Likert scale, and covers underlying beliefs in each of the six previously mentioned domains. Examples of these beliefs are given in Table 1.1 below. The III measures appraisals of a specific intrusion, such as “*I must regain control of this thought*” and “*Thinking this thought could make it happen*”.

Table 1.1 Examples of beliefs taken from the OBQ in each of the six domains.

Belief Domain	Examples of beliefs
Responsibility	<p>“If I don’t act when I foresee danger, then I am to blame for any consequences”</p> <p>“For me, even slight carelessness is inexcusable when it might affect other people”</p>
Importance of thoughts	<p>“Having bad thoughts means I am weird or abnormal”</p> <p>“Having bad urges is as bad as actually carrying them out”</p>
Control of thoughts	<p>“Having control over my thoughts is a sign of good character”</p> <p>“If I exercise enough will power, I should be able to gain complete control over my mind”</p>
Overestimation of threat	<p>“Even when I am very careful, I often think bad things will happen”</p> <p>“Even ordinary experiences in life are full of risk”</p>
Intolerance of uncertainty	<p>“It is essential for me to consider all possible outcomes of a situation”</p> <p>“I often think I will be overwhelmed by unforeseen events”</p>
Perfectionism	<p>“In order to be a worthwhile person I must be perfect at everything I do”</p> <p>“I must keep working at something until it’s done exactly right”</p>

The authors generally agree that all such beliefs domains are pertinent in OCD, although there are differences in opinion as to which have ‘primary’ status, and which have specificity to OCD. Salkovskis et al (2000) suggest that responsibility beliefs are primary, and that the latter three categories are likely to be less specific and found in a wide range of clinical disorders such as generalised anxiety disorder.

By contrast, Wells & Matthews (1994) propose a ‘meta-cognitive’ model based primarily upon beliefs about the importance of thoughts, and in particular drawing on the concept of ‘thought-action fusion (TAF)’ (Rachman, 1993), which is the belief that thoughts are particularly closely associated with actions, on a causal or a moral level. An example of causal TAF would be “*thinking about harming my child means I am going to do it*” and of moral TAF would be “*thinking about blaspheming in church is as bad as actually doing it*”. Such beliefs will motivate mental and/or behavioural neutralising. This could take the form of behavioural checking (e.g. that one has not already caused harm to one’s child) or mental distraction, or attempts to control the flow of such thoughts. Furthermore, the discomfort-reducing effects of these strategies will serve to strengthen beliefs around the value of neutralising responses. In addition, the positive beliefs about neutralising will be accompanied by negative beliefs stemming from the fact that neutralising can be lengthy and itself highly distressing. Responsibility appraisals are seen as secondary emergent properties of these meta-cognitive processing cycles. However, sufficient evidence is not as yet available to evaluate these claims. Preliminary psychometric data suggest that ratings on the six belief dimensions mentioned above are highly correlated (OCCWG, 2001), and it is as yet unclear whether the dimensions are truly distinct, or different manifestations of a complex belief system.

The meta-cognitive perspective highlights the fact that the person with OCD is likely to have important views about the very cognitive processes that lie at the heart of the disorder. This suggests that another potentially interesting area of investigation might be people’s views about the beliefs themselves. In particular, do people regard their beliefs as normal or abnormal? Put another way, to what extent do those with OCD

possess insight into the idiosyncrasy of their beliefs? Such investigation has not yet been conducted systematically.

1.5.2 Summary

Several domains of underlying belief have been shown to play a role in OCD, in addition to responsibility discussed earlier. It is probable that a complex interaction of cognitive and meta-cognitive processes occurs in the minds of those with OCD. Pursuing this theme of meta-cognition, it is proposed that insight into the underlying belief systems may be a worthwhile area of inquiry. Before considering this in more detail, however, the wider concept of insight in OCD will be considered.

1.6 Insight in OCD

1.6.1 Overview

Insight has not received a great deal of research attention in OCD. Good insight into the senselessness of obsessional phenomena has been traditionally regarded as a defining characteristic of OCD, as in DSM-III-R (APA, 1987), and on this basis OCD has fallen into the psychiatric categorisation of a neurotic rather than a psychotic disorder. Patients classically experience their intrusions as ego-dystonic, and attempt to resist them. This criterion has been a major one in differentiating obsessions from delusions. Nevertheless, such a blanket categorisation has been questioned (Eisen, Phillips & Rasmussen, 1999), and whilst research is limited, there is some evidence suggesting that insight is a more complex phenomenon in OCD, existing perhaps on a continuum (Kozak & Foa, 1994). This will be reviewed briefly.

1.6.2 Research Evidence on Insight in OCD

Insel & Akiskal (1986), for example, cite several case examples in which obsessions fluctuated into transient delusional states during the course of illness, the patients temporarily losing all semblance of insight. The authors conducted a phenomenological analysis of 23 patients with OCD, looking at expectations of consequences (other than anxiety) if the compulsion was not carried out, explanations as to why others did not share their ideas, resistance and bizarreness. Whilst most patients (78%) considered their obsessions to be senseless and absurd, many considered the likelihood of dire consequences if their ritual was not performed to be very real, and resistance to the thoughts also varied along a continuum. Eisen & Rasmussen (1993) carried out an analysis of clinical features and demographic characteristics of 475 OCD patients, and found evidence supporting the notion that insight varies along a continuum. In a field trial for DSM-IV (Foa & Kozak, 1995), the authors examined the requirement from DSM-III-R that patients regard the symptoms of their disorder as excessive or unreasonable. They found a large majority of patients to be uncertain on this score, largely concurring with the previously cited studies. This diagnostic criterion has been accordingly de-emphasised in DSM-IV, now requiring only that *'At some point during the course of the disorder, the person has recognised that the obsessions or compulsions are excessive or unreasonable'*. (There is also now a "with poor insight" specifier, which may be applied in cases where there is an apparent failure to recognise the senselessness of the obsessions or compulsions.)

The above studies have addressed the perceived senselessness of the immediate belief relating to the feared consequence of not performing a compulsion, e.g. the belief *"If I*

don't go and wash my hands then I will get a dangerous disease". However, as mentioned earlier, recent research has in addition stressed the importance of specific underlying beliefs such as a tendency to assume responsibility for potential harm, as measured e.g. by the OBQ (OCCWG, 1997). Research has not as yet addressed insight in relation to these beliefs.

It has also been suggested that poor insight may be associated with a deteriorative course (Eisen & Rasmussen, 1993) and may be a significant factor in explaining treatment failures (e.g. Foa, 1979), although data on such relationships are lacking. Foa (1979) highlighted two groups of OCD patients who seemed not to respond to exposure treatment despite adherence, those with 'overvalued ideation' and those with severe depression. The former group showed strong beliefs that their fears were realistic. Whilst not demonstrating classic psychotic thought patterns, the overvalued ideation did border upon a delusional intensity. These patients rated the likelihood of the feared consequences occurring as near 100% if they did not execute their compulsion. Whilst demonstrating some within-session response, they did not maintain benefit between sessions. By contrast, however, Lelliott et al (1988) found little difference in response to behavioural therapy amongst those with high and low conviction about their obsessions. Whether insight is a significant predictor of success in behavioural therapy is as yet unresolved, but in any case it might be speculated that the role of insight will have greater significance for a more cognitive approach, when the beliefs themselves are being specifically addressed in therapy.

1.6.3 'General' vs 'Specific' Levels of Insight

In principle there may be more than one level of 'insight'. At the most general level, insight implies the knowledge "*I have a problem*", and this level perhaps maps onto the dichotomous categorisation of psychiatric disorders into 'neurotic' and 'psychotic'. The evidence reviewed earlier shows that the majority of OCD sufferers fall into the neurotic category, but a minority may fluctuate in and out of the psychotic realm. At a more specific level, insight might involve a more accurate perception of some of the mental processes which are involved in the problem. For example, this might include beliefs such as "*I tend to ruminate quite a lot*" or "*When I feel unhappy, I tend to think very negatively about myself*". Poor insight, at this level, might involve a belief such as "*my thoughts are always accurate and consistent however I'm feeling*" or "*It is normal to struggle as I do to control my violent thoughts*".

Insight has not been investigated in detail at this more specific level. Partly this may be because it assumes a particular model of conceptualisation on the part of the investigator. For example, insight into responsibility bias would probably imply a commitment to a specific cognitive approach. However, such insight could potentially be a valuable area of inquiry, and might ultimately serve to enhance or refine the cognitive model. If it was found to be a measurable phenomenon, people with OCD may well show a spectrum of such insight. Furthermore, it may be hypothesised in general that a greater degree of insight at this more specific level might facilitate and/or motivate the person to make specific changes which might alleviate or reduce the severity of the problem. For example, an individual might use such insight to engage in a particular form of anxiety-reducing self-talk (e.g.

“Although I feel very responsible right now, there are many other people around”), or over time re-evaluate their conviction for certain strongly held assumptions, such as the need to take ultimate responsibility for everything around them. In addition, it might also be expected that this sophisticated level of insight could be influenced by experience of therapy, especially those types of therapy which involve a cognitive formulation of problems and some psycho-educational component.

1.6.4 Summary

Evidence suggests a continuum of insight in OCD, and whilst the majority of sufferers show ‘good insight’ there are some who do not, and these may be associated with a more deteriorative course and poorer treatment outcome, although the evidence is lacking. Insight in OCD has only so far been studied at a general level, and it is argued that there may be value in studying insight into specific beliefs, especially insight into responsibility. The concept of responsibility insight is outlined in more detail next.

1.7 Responsibility Insight

The preceding discussion has highlighted the important role played by an inflated sense of responsibility in OCD, and the usefulness of considering insight in some detail. This leads naturally onto consideration of the concept of ‘*responsibility insight*’, which has not thus far been addressed explicitly in the literature on OCD. A proposed definition is given below.

Responsibility insight is defined as the awareness of the difference, if it exists, between the degree of responsibility typically assumed by oneself, and by others in general, in situations where there is a perceived potential for harm to oneself or others.

Several points are worth noting about this construct.

1. The definition assumes the meaning of responsibility to be that proposed by Salkovskis and others, and stated earlier.
2. This definition suggests that a way of measuring responsibility insight is to discover how people with OCD think they differ from others. This could be achieved in two ways. A direct method might be to ask OCD participants to rate responsibility beliefs both for themselves, and for how they think others would rate them. A more indirect method might be to use a task likely to elicit a responsibility bias, and again ask participants to complete it for themselves and for how they believe others would complete it.
3. The variable of responsibility insight would be expected to be reflected on a continuum. At one extreme, an individual with inflated responsibility might believe that others share their responsibility attitudes (low responsibility insight). At the other extreme, an individual might demonstrate a very accurate perception of others' responsibility attitudes as different from their own (high responsibility insight). Between these extremes, an individual might perceive some difference between self and others but *underestimate* this difference (moderate responsibility insight).

1.8 Hypotheses

1.8.1 Overview of Study

The purpose of this study is to explore the concept of insight, as applied to the underlying beliefs held by people with OCD, and in particular responsibility insight. Two separate approaches will be taken, as suggested earlier. Common to each is the idea of obtaining 'self' and 'other' ratings, to access the individual's awareness of the idiosyncrasy of their own responses.

The first approach involves the development of a new scale, the Self Compared to Others Reactions to Events Scale (SCORES), which is described in detail in the next chapter. This scale has been specifically designed to generate two variables, a self-rating of responsibility reaction and an 'others' rating, which is argued to provide a measure of responsibility insight. The second approach involves obtaining direct 'self' and 'other' ratings for a variety of underlying obsessional beliefs taken from the Obsessive Beliefs Questionnaire (OBQ). All six belief domains of the OBQ are covered, although particular attention is paid to the responsibility beliefs. In general it is expected that most people with OCD will have at least some responsibility insight, and so 'self' ratings are expected, on average, to be higher than 'other' ratings. Within the group, however, there is expected to be a spectrum of responsibility insight.

The specific questions addressed by this thesis can be divided into main hypotheses, which pertain to the central themes of investigation, and subsidiary hypotheses, which are of relevant and of related interest but which are less central to the study. These are detailed below.

1.8.2 Main Hypotheses

- (1) On average, it is expected that the 'Self' ratings will be higher than the 'Other' ratings in the OCD group but not in the control group on (a) the SCORES responsibility ratings, and (b) the responsibility beliefs on the OBQ.
- (2) Amongst the OCD group, higher responsibility levels will be associated with more severe levels of OCD. This is essentially a replication of previous findings (e.g. OCCWG, 2001; Salkovskis et al, 2000), although responsibility will also be measured using a novel measure (the SCORES).
- (3) Poorer responsibility insight as measured on the SCORES will be associated with more severe levels of OCD. This is a novel prediction, which originates from the ideas set out earlier that specific insight may facilitate and/or motivate the individual to make certain changes to alleviate or reduce the severity of the problem.
- (4) If evidence supports the previous hypothesis, (i.e. poorer responsibility insight is associated with severity of OCD), then further alternative hypotheses suggest that:
 - (a) responsibility insight is associated with severity as a function of its association with responsibility.
 - (b) responsibility insight moderates the relationship between responsibility and severity.
 - (c) responsibility insight is associated with severity independently of responsibility.
- (5) Hypotheses 3 and 4 will also hold when responsibility insight is instead measured using the belief ratings approach.

1.8.3 Subsidiary Hypotheses

- (6) Experience of therapy is expected to be associated with greater responsibility insight. As mentioned earlier, therapy might be expected to uncover or raise awareness of specific biases, such as inflated responsibility, especially if it contained a psycho-educational component.
- (7) Duration of illness might be associated with poorer responsibility insight. This idea is an extension of the hypothesised association with severity, and from suggestions that poor general insight might be associated with a deteriorative course.

Chapter 2. Method

2.1 Overview

This chapter details the recruitment of participants for the study, the measures used, and finally the procedure employed to test the various hypotheses posed. Participants included both those with OCD and matched controls. The measures used included both standardised instruments employed widely in the field and a newly devised scale for this study, the Self Compared to Others Reactions to Events Scale (SCORES), the development of which is described in detail.

2.2 Participants

2.2.1 Power Analysis

A precise determination of the number of participants with OCD required in this study for adequate statistical power was difficult, as responsibility insight has not been studied explicitly before, and so the literature provided no estimates of effect size anticipated. However, hypothesis 2 of this study (the association of responsibility and severity) was essentially a replication of previous work. The OCCWG (2001) found a correlation of $r=0.48$ between the responsibility subscale of the Obsessive Beliefs Questionnaire (OBQ-R) and OCD severity measured on the Yale Brown Obsessive Compulsive Scale (YBOCS). As these measures were also to be used in this study (see later), this correlation was taken as an estimate of the effect size in the OCD population. A power analysis found that a sample size of $n=32$ would be required for 80% power in detecting a significant correlation (at 5% significance level, two-tailed)

if a correlation of $r=0.48$ were to exist in the general OCD population. Therefore a sample of $n=32$ was considered a lower bound of the desired number of participants with OCD. In reality, the number of participants recruited was also determined by their availability. A similar number of control participants was aimed for.

2.2.2 *OCD Participants*

Participants with OCD were recruited from three sources: (1) A psychology clinic providing cognitive behaviour therapy for adults with OCD, (2) By advertisement in the newsletter of Obsessive Action, a national organisation for people with OCD, (3) By direct recruitment at an Obsessive Action annual conference. All those who expressed an interest were sent an information sheet about the study and were asked to sign and return a consent form if they wished to participate. These are shown in Appendix 2. Inclusion criteria were to be 18 years or older, and to satisfy diagnostic criteria of Obsessive Compulsive Disorder according to DSM-IV (APA, 1994). Comorbid neurotic conditions such as depression or panic disorder were allowed. Treatment status (i.e. previously had treatment, currently in treatment, never had treatment, or awaiting treatment) was recorded but all conditions were allowed. Anyone with a primary psychotic diagnosis was to be excluded, although in fact no-one volunteered from this category. From the three sources mentioned, 40 people expressed an interest, of whom 35 agreed to participate. 1 subsequently dropped out and 2 were later excluded from analyses for not meeting diagnostic criteria for OCD. 32 people with OCD were therefore finally included in the sample for analysis. These consisted of 6 from the psychology clinic, 9 from the newsletter advertisement and 17 by recruitment at the Obsessive Action conference.

Of the 32 OCD participants, there were 15 males and 17 females. Ages ranged from 24 to 67, with mean age 41.3 years, s.d. 10.4 years. Years of education ranged from 10 to 19 years, mean 13.4, s.d. 2.8 years. 18 lived in London and 14 lived outside London.

2.2.3 Control Participants

Control participants were required for the study, matched for age, sex and years of education. These were recruited by advertisement at a GP surgery waiting area. Inclusion criteria were to be 18 years or older, and an exclusion criterion was to have any past psychiatric history. Controls were given an information sheet about the study, and were also asked to sign a consent form. These are included in Appendix 2. A total of 32 control participants were recruited to participate in the study, matched with the OCD group on three variables of age, sex and years of education. They consisted of 16 males and 16 females. Ages ranged from 26 to 63, with mean age 43.5 years, s.d. 9.7 years. Years of education ranged from 9 to 19, with mean 12.8 years, s.d. 2.5 years.

Independent samples t-tests found no significant difference between the OCD group and the control group in terms of age ($t(62)=0.91$, $p=0.37$) or years of education ($t(62)=1.05$, $p=0.30$). Also, a chi-squared test found no difference in gender ratio between the OCD and control groups ($\chi^2(1)=0.06$, $p=0.80$). The control group was therefore considered to be adequately matched with the OCD group on variables of age, sex and education. These results are summarised in Table 2.1 below.

Table 2.1 Age, sex, education of OCD and matched control participants.

	OCD participants (n=32)	Control participants (n=32)	Comparison
Age (years)	Mean 41.3 [s.d. 10.4] Range 24-67	Mean 43.5 [s.d. 9.7] Range 26-63	t(62)=0.91, p=0.37
Sex	15 males 17 females	16 males 16 females	$\chi^2(1)=0.06$, p=0.80
Education (years)	Mean 13.5 [s.d. 2.7] Range 10-19	Mean 12.8 [s.d. 2.5] Range 9-19	t(62)=1.05, p=0.30

2.2.4 Ethical Approval

Ethical approval for this study was granted from two bodies. The Camden and Islington Local Research Ethics Committee covered participants recruited from the psychology clinic in the Trust. The Joint UCL/UCLH Committees on the Ethics of Human Research covered the participants recruited from Obsessive Action, as well as the control participants. Copies of the ethical approval letters from each body are found in Appendix 3.

2.3 Self Compared to Others Reactions to Events Scale (SCORES)

2.3.1 Objectives of the Scale

The Self Compared to Others Reactions to Events Scale (SCORES) was developed for this study. The main objective was to provide a measure of ‘responsibility insight’ by asking people with OCD to rate how they would react *and* how they thought others would react (i.e. the average person on the street) in a series of hypothetical scenarios. These scenarios were devised in a way that implied a theme of potential responsibility for preventing a harmful consequence. The rationale was that in situations where OCD ratings were high, poor responsibility insight would be indicated by exaggerated

ratings of *other's* reactions also, because of a lack of awareness of the idiosyncrasy of their own inflated responsibility. On the other hand, good responsibility insight would be reflected by a more accurate estimation of others' normative reactions to such scenarios, even if their own self-ratings were high.

2.3.2 Description of the Scale

The scale consists of six hypothetical scenarios, which are presented in Table 2.2 below.

Table 2.2 Six hypothetical scenarios employed in the SCORES

<p>Scenario 1. You are walking down a street and a young boy of about 8 walks by. You exchange glances as he passes. Just at that moment he trips over and bruises his knee, and starts to cry.</p>
<p>Scenario 2. You are cooking a meal for some friends. One of the ingredients has been in the fridge for over a week but you use it anyway because it smells OK. Shortly after the meal one of your friends has to be sick.</p>
<p>Scenario 3. A neighbour asks you to keep an eye on their flat while they are away for a week. While they are away, there is a burglary during the night and some valuable items are stolen. When your neighbour returns she seems very upset.</p>
<p>Scenario 4. An old friend was going to drive home after a party. He looked very tired, although he had not been drinking. You ask him is he is OK to drive and he says yes. The next day you hear the news that he had a car accident on the way home which involved another car. He and another man were badly injured.</p>
<p>Scenario 5. You are talking to an elderly couple one day while you are out. You have only recently got over a bad cold. A week later you happen to pass the man again, who stops to say that his wife was ill and had to go into hospital for tests.</p>
<p>Scenario 6. A friend is driving you home one evening along a busy road and you notice in the distance a dog running in and out of the road, near some parked cars. You don't say anything because you think your friend has also noticed the dog, but your friend doesn't slow down and only notices too late, hitting and injuring the animal.</p>

For each scenario, respondents are asked to rate how they would feel on six dimensions (sad, guilty, angry with oneself, worried, responsible and ashamed) by marking an 'X' on six 11cm visual analogue scales. They are also asked to mark an 'O' on each of the same scales, to indicate how they think other people would feel in the same situation (i.e. the average person on the street). Marks can be made anywhere along the visual analogue scales, although five anchoring labels are used to guide responses, from 'not at all' at one end to 'extremely' at the other. All marks are then measured and recorded to the nearest millimetre. An example scenario is

provided in the scale instructions to help respondents understand what is required of them.

Ratings are averaged across the six scenarios, to generate an overall ‘self’ and ‘other’ rating on each of the six emotional dimensions, namely (1) sad, (2) guilty, (3) angry with self, (4) worried, (5) responsible and (6) ashamed. Of most interest for the study were the self and other ratings for the 5th of these, responsibility, and indeed this was the only reaction for which specific *a priori* hypotheses were made. The other reactions were included for exploratory value, in case they shed any further light on people’s reactions or insight. The cognitive model would predict that other emotional reactions would be very likely to accompany a feeling of responsibility, especially perhaps worry, in individuals with OCD. However, the extent of such associations were not specifically predicted in this study. The full scale is provided in Appendix 4.

2.3.3 *Specific Features of the Scenarios*

Several features were incorporated into the construction of the scenarios.

1. All scenarios involved a consequence of harm, e.g. bodily injury, food poisoning, illness, or emotional upset after burglary.
2. There was a low level of implied personal influence in causing or failing to prevent this harmful consequence, e.g. exchanging glances with a small boy before he trips, using a *slightly* suspect ingredient in cooking, and possibly having infected an elderly woman after getting over a cold. The *low* level aimed to ensure that controls would not in general rate very highly on perceived responsibility.

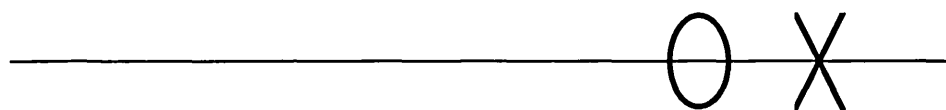
3. A variety of situations were covered within these parameters, and results averaged across scenarios, to prevent the results being skewed by a particular obsessive concern of any given individual, and to even out individual differences in perceived importance (e.g. a particular concern over harm to animals, or children).
4. The severity of the harmful consequences was varied across scenarios, from a boy bruising his knee to an old friend being badly injured in a car accident. This was intended to prevent response bias (e.g. always marking high or low without considering each scenario fully), and to prevent any problems of ceiling or floor effects for either the OCD group or control group.
5. The scenarios were realistic and vivid enough, and sufficient detail was provided that the imagination and emotions should be engaged, and responses would not be made purely on an intellectual or abstract level. In addition ambiguity was minimised to prevent the need for additional clarification, and potentially to enhance the reliability of the scale.

2.3.4 Interpretation of Components

The SCORES generates two variables of particular interest, a 'self' responsibility rating (SELF-RESP) and an 'others' rating (OTHERS-RESP). Of these, the SELF-RESP component is perhaps easiest to interpret. It is interpreted as a measure of generalised responsibility reaction. Those who manifest an inflated sense of responsibility (as defined earlier) would be more likely to score highly on this component. As the ratings are averaged across the range of scenarios, SELF-RESP would be expected to reflect a general inflated responsibility bias, and not a situationally-specific measure of responsibility.

For those with OCD, the OTHERS-RESP component is argued to reflect the concept of responsibility insight. The rationale for this interpretation is that an individual with poor responsibility insight will tend to rate others' responsibility reactions higher, like their own. They will be attributing the responsibility they perceive as inherent to the scenarios, and not to their own inflated responsibility bias. By contrast, an individual with good responsibility insight will attribute the perceived responsibility to their own bias, and thus will mark others' responsibility reactions lower.

During the development of the SCORES, the possibility was considered of using the *discrepancy* between self and other ratings as representative of responsibility insight. However, a problem with this interpretation lies in the fact that SELF-RESP ratings were not uniformly high amongst the OCD group, but included a considerable degree of variation. Logically, a given (low) rating on OTHERS-RESP was considered to be equally representative of good insight, independently of the SELF-RESP rating. Therefore, if the self-other discrepancy had been used as the measure of responsibility insight, then the SELF-RESP rating itself would have unjustifiably determined whether insight was regarded as high or low. Examples of these various situations are illustrated in Figure 2.1 below.



Example 1. High Responsibility, Poor Responsibility Insight



Example 2. High Responsibility, Good Responsibility Insight



Example 3. Moderate Responsibility, Good Responsibility Insight

Figure 2.1 Interpretation of SELF-RESP (X) and OTHERS-RESP (O) ratings

The two components, SELF-RESP and OTHERS-RESP, were found not to be significantly correlated in the OCD group ($r=0.28$, $p=0.13$). The issues of interpretation are addressed further in the discussion.

2.3.5 Preliminary Validation

As part of the preliminary validation process for the SCORES, it was predicted that the 'self' ratings of responsibility (SELF-RESP) should be higher in OCD participants compared to controls. A one-tailed independent samples t-test confirmed that self ratings of responsibility were higher in OCD participants than in controls ($t(62)=5.06$, $p<0.001$). Furthermore, post-hoc analyses using Bonferroni corrections revealed significantly higher 'self' ratings amongst the OCD group compared to controls on the other five emotional reactions; sad ($t(62)=2.80$, $p=0.007$), guilty ($t(62)=4.89$, $p<0.001$), angry with oneself ($t(62)=4.56$, $p<0.001$), worried ($t(62)=3.63$, $p=0.001$)

and ashamed ($t(62)=3.64, p=0.001$). Further post-hoc analyses on the OCD group revealed significant intercorrelations between the six emotional reactions, with Pearson product moment correlation coefficients ranging from $r=0.40$ (responsibility and sadness) to $r=0.94$ (responsibility and guilt).

2.3.6 Internal Consistency

Nunnally's (1978) criteria were used to judge internal consistency. These criteria define Cronbach's $\alpha \geq 0.70$ as "acceptable" and $\alpha \geq 0.80$ as "good". It was found that the SCORES demonstrated acceptable levels of internal consistency for the SELF-RESP component (Cronbach's $\alpha = 0.78$) and acceptable levels for the OTHERS-RESP component (Cronbach's $\alpha = 0.74$). In addition, the items of the scale were submitted to an item-removal analysis, and it was found that there would be no significant increase in internal consistency on either component by removing any items from the scale. Therefore, all six scenarios were retained in the scale.

2.3.7 Test-retest Reliability

At this preliminary stage in the development of the SCORES, no data are available on the test-retest reliability properties of the scale.

2.3.8 Convergent and Discriminant Validity

The SELF-RESP component was significantly correlated with another measure of responsibility, the responsibility subscale of the OBQ ($r=0.61, p<0.001$), suggesting a good level of convergent validity for this component. To assess discriminant validity, SELF-RESP was correlated with other measures of OCD symptomatology, anxiety,

and depression scores. Of these, all correlations were lower or insignificant, except for anxiety (as measured by the anxiety subscore of the HADS). The correlation coefficient of SELF-RESP with anxiety was $r=0.60$. It is noted that this correlation is not greater than the correlation with OBQ-R, but is at an almost equal level. This suggests that discriminant validity of the SELF-RESP component is borderline acceptable.

The convergent and discriminant validity of the OTHERS-RESP component is hard to establish at this stage as responsibility insight is not a construct which has previously been investigated systematically. Correlations were found to be below significance level with anxiety ($r=0.14$, $p=0.42$), depression ($r=0.01$, $p=0.99$) and the OBQ-R ($r=0.33$, $p=0.07$), and as mentioned earlier, correlation with the SELF-RESP component was also below significance level ($r=0.28$, $p=0.13$). Nevertheless, the adequate internal consistency of the component suggests that some construct is indeed being systematically measured, and the independence from other variables suggests that OTHERS-RESP is not merely another weak measure of responsibility or general anxiety. These issues are addressed further in the discussion.

2.3.9 Summary of SCORES

The aim of the SCORES was to access the hypothesised construct of responsibility insight, by asking respondents to provide 'self' and 'other' reactions to six hypothetical scenarios designed to incorporate a theme of responsibility for harm. Accordingly, the scale generates two main variables, SELF-RESP and OTHERS-RESP. The first is argued to be essentially a measure of general responsibility, and was found to possess good convergent validity with another measure of responsibility.

For those with OCD, the OTHERS-RESP component is argued to reflect a measure of responsibility insight, and was found to be relatively independent from SELF-RESP. Both components possessed adequate internal consistency characteristics. Test-retest characteristics are as yet unknown.

2.4 Other Measures

2.4.1 Severity of OCD Symptoms

The Yale-Brown Obsessive Compulsive Scale (YBOCS; Goodman et al, 1989a, 1989b) was used to assess levels of OCD severity. This is a 10-item semi-structured interview, generating an overall severity score, as well as two separate subscores for obsessions and compulsions. It was designed to address the problems of other OCD rating scales by providing a measure of severity independent of type or number of obsessional symptoms. The terms ‘obsession’ and ‘compulsion’ are first defined to the participant, after which a preliminary symptom checklist is administered, consisting of 39 obsessions and 25 compulsions. The obsessions cover areas of aggression, contamination, sex, hoarding, religion, symmetry/exactness, somatic and other miscellaneous items. The compulsions cover areas of cleaning, checking, repetition, counting, ordering/arranging, hoarding/collecting, and other miscellaneous items. The administrator asks if each symptom is a current or past problem. The three *main* obsessions and compulsions are then selected. The 10-item scale is then used to rate the obsessions and compulsions separately on dimensions of time spent, interference, distress, resistance and controllability. The schedule takes approximately 30 minutes to complete. The YBOCS has excellent inter-rater reliability, acceptable internal consistency, good convergent validity although less good discriminant validity (Woody, Steketee and Chambless, 1995). Its sensitivity

suggests this is a good measure for assessing variation in severity *within* an OCD population. In a review, Taylor (1995) found the YBOCS to be the best available observer-rated scale of obsessive-compulsive symptoms.

The Maudsley Obsessive Compulsive Inventory (MOCI; Hodgson & Rachman, 1977) was used to assess general level of OCD symptomatology. This is a widely used 30-item self-report scale, with each statement rated as 'True' or 'False'. An example item is "I don't worry unduly about contamination if I touch an animal". The MOCI is quick to administer, and has generally acceptable psychometric properties. Several of the items are reverse coded to reduce response bias. The scale was developed on the basis of a factor analysis, and accordingly four subscales have emerged, namely washing (11 items), checking (9 items), obsessional slowness/repetition (7 items) and doubting/conscientiousness (7 items). A minority of items are in more than one subscale. The main strength of the MOCI is the fast and reliable measurement of the major categories of overt compulsions, namely washing and checking. However, it suffers in not adequately addressing covert rituals, rumination or compulsive hoarding, and does not explicitly address severity in terms of interference, resistance or distress.

2.4.2 Obsessive Beliefs

The Obsessive Beliefs Questionnaire (OBQ-87; Obsessive Compulsive Cognitions Working Group, OCCWG, 1997, 2001) was used to assess levels of obsessive beliefs. This is an 87-item self-report scale, developed by the international working group on OCD, whose aim was to standardise cognitive assessment in the field of OCD. On

the OBQ, beliefs are rated on a 7-point Likert scale from *'Disagree very much'* to *'Agree very much'*. Six subscale scores are generated, in the domains of (1) responsibility, (2) control of thoughts, (3) importance of thoughts, (4) overestimation of threat, (5) intolerance of uncertainty and (6) perfectionism. Examples of such beliefs were presented earlier in Table 1.1. Preliminary findings from a multi-site psychometric study has demonstrated excellent internal consistency and test-retest reliability, and good criterion, convergent and discriminant validity (OCCWG, 2001). High correlations have been detected amongst several of the subscales, and the extent of overlap and interdependence of the subscales is as yet unclear. Of particular relevance in this study will be the responsibility subscale, consisting of 16 items. For convenience this subscale will be denoted 'OBQ-R'.

2.4.3 Anxiety/Depression ratings

To assess levels of anxiety and depression, the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was used. This is a 14-item self-report scale yielding two subscores for depression and anxiety, each ranging from 0-21. Each item consists of a statement and four possible responses, for example *"I still enjoy the things I used to enjoy"* has the possible responses 'Definitely as much', 'Not quite so much', 'Only a little', or 'Hardly at all'. Although now widely used, the scale was originally developed for hospital use, and is free from somatic symptoms of depression and anxiety. Response bias is reduced by alternating the order of responses. The scale is fast to administer, and generally shows reasonable psychometric properties (Zigmond & Snaith, 1983). The authors suggest an 8-point cutoff for 'caseness' on each of the anxiety and depression subscales. Some studies

suggest the scale may over-diagnose depression (e.g. Silverstone, 1994) and a recent study found that the HADS items may reflect three distinct factors (Dunbar et al, 2000), based on a tripartite model of anxiety and depression with factors of negative affectivity, anhedonic depression and autonomic anxiety (Clark & Watson, 1991). However, precise measurement of anxiety and depression was not of central importance in this design, and therefore because of its ease of administration, wide usage, and reasonable psychometric properties it was considered suitable for the study.

2.5 Procedure

2.5.1 OCD Participants

The OCD participants were initially sent by post the Maudsley Obsessive Compulsive Inventory (MOCI), the Hospital Anxiety and Depression Scale (HADS) and the Obsessive Beliefs Questionnaire (OBQ). These were returned and a second stage was organised. For the London participants a one-to-one interview was arranged, and for the other participants a telephone interview was arranged.

In the second stage, the participants were taken through the DSM-IV diagnostic criteria for OCD, to check the validity of their diagnosis. Two of the original sample did not reach diagnostic criteria for OCD, and their results were not included in any analyses, as mentioned earlier. The participants were also administered the Yale Brown Obsessive Compulsive Scale (YBOCS). Age, sex, educational history and brief OCD history were obtained, including age of onset, major obsessive/compulsive problems and whether they had received psychological treatment or medication.

For each OCD participant, an individual belief subset was constructed from the original 87 items on the OBQ. This consisted of twelve items, two from each of the six belief domains covered in the OBQ. The beliefs chosen were those endorsed most strongly by the participant in each domain in the initial completion of the OBQ. (In the case of equally strong endorsements, the items were selected at random from the available choices). This belief subset was then presented to the participant, who was asked to rate, using the original Likert scale (1-7), how much they agreed or disagreed with the statement, and how much they thought the ‘average person in the street’ would agree or disagree with the statement. Resultant scores were therefore an average ‘self’ and ‘other’ belief rating, in each of the six belief domains. In the case of the telephone-interview participants, this belief subset was posted to the participant, in identical form.

Each OCD participant was also then given the SCORES, which has been described earlier. In the case of the non-London participants, the scale was once again posted to the participant. During completion of the SCORES, and of the preceding belief subset, participants were encouraged to write any qualitative comments that occurred to them on the forms to supplement their quantitative ratings. After completion of all scales, these comments were discussed informally. In addition, participants were engaged in a short discussion about their views of the responsibility beliefs. This included whether they believed such beliefs to be rational, whether they believed others in general shared these beliefs, and how relevant they thought such beliefs were to their OCD. Notes were taken from these discussions, although the qualitative data were not analysed formally. No discussion took place before all the quantitative data had been collected. The total time spent in the interview stage lasted approximately

90 minutes, depending on the participant. No payment was made, although travel expenses were refunded on request in the form of vouchers.

2.5.2 Control Participants

The 32 control participants were matched on age, sex and years of education, and had declared no previous psychiatric history. They were used in this study as a comparison group for the newly devised SCORES and the belief subsets from the OBQ. For each control participant, one 'individual belief subset' was selected at random from those constructed for the 32 OCD participants, described above. As before, this required the 'self' and 'other' ratings of the selected obsessional beliefs, using the original Likert Scale (1-7) of the OBQ. This was sent by post to the participant, along with a copy of the SCORES and a stamped addressed envelope for return. As with the OCD group, participants were encouraged to write any supplementary qualitative comments on the ratings they were making in the space provided on the forms, although such qualitative data were not analysed formally. On receipt of the completed forms, the participant was sent a payment of £5.

Chapter 3. Results

3.1 Overview

This chapter details the results of investigation in this study. It opens with a description of the OCD participants, in terms of symptom severity, subtypes, duration of illness, anxiety, depression, obsessional belief ratings, experience of therapy and reasons for participation in the study. Then, the results are reported for each of the major hypotheses tested. In the final section, the subsidiary hypotheses of the study are tested. All tests may be assumed to be two-tailed unless otherwise specified.

3.2 OCD Group Descriptives

3.2.1 *Symptom Severity of OCD*

On the Yale Brown Obsessive Compulsive Scale (YBOCS), scores ranged from 13 to 33, mean 23.3, s.d. 5.0. YBOCS obsession subscale scores ranged from 2 to 17, mean 11.1, s.d. 3.7. YBOCS compulsion subscale scores ranged from 6 to 20, mean 11.6, s.d. 3.1. On the Kolmogorov-Smirnov test, YBOCS total scores were found to be adequately normally distributed ($K(32) = 0.13$, $p=0.20$). A histogram depicting the distribution of YBOCS total severity scores is provided in Figure 3.1 below.

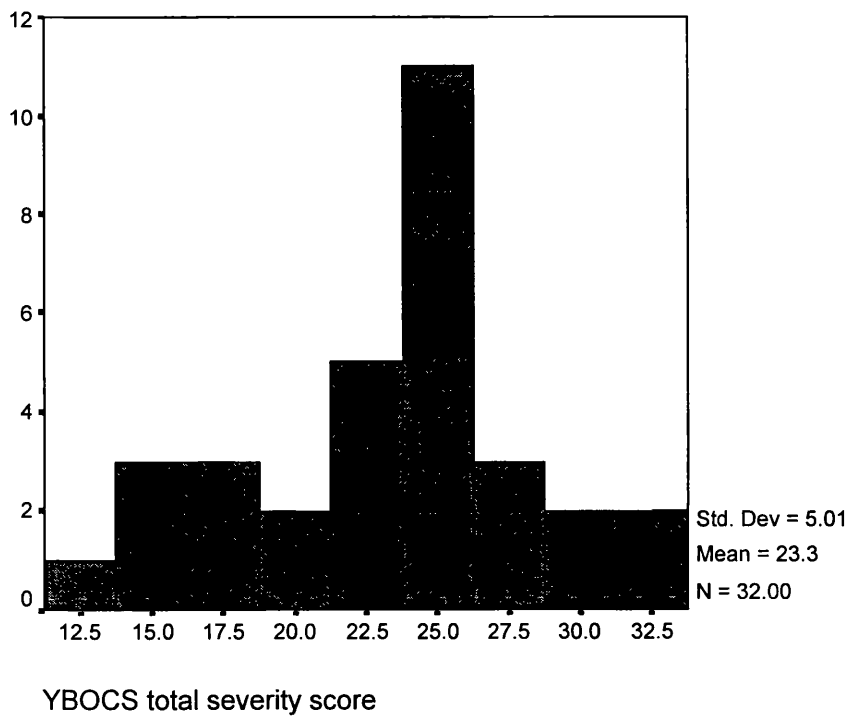


Figure 3.1 Histogram depicting scores on the YBOCS measure of total severity.

On the Maudsley Obsessive Compulsive Inventory (MOCI), total scores ranged from 2 to 26, mean 14.8, s.d. 5.4. On the Kolmogorov-Smirnov test, MOCI scores were found to be adequately normally distributed ($K(32) = 0.10, p=0.20$). A histogram depicting the distribution of MOCI total severity scores is provided in Figure 3.2 below.

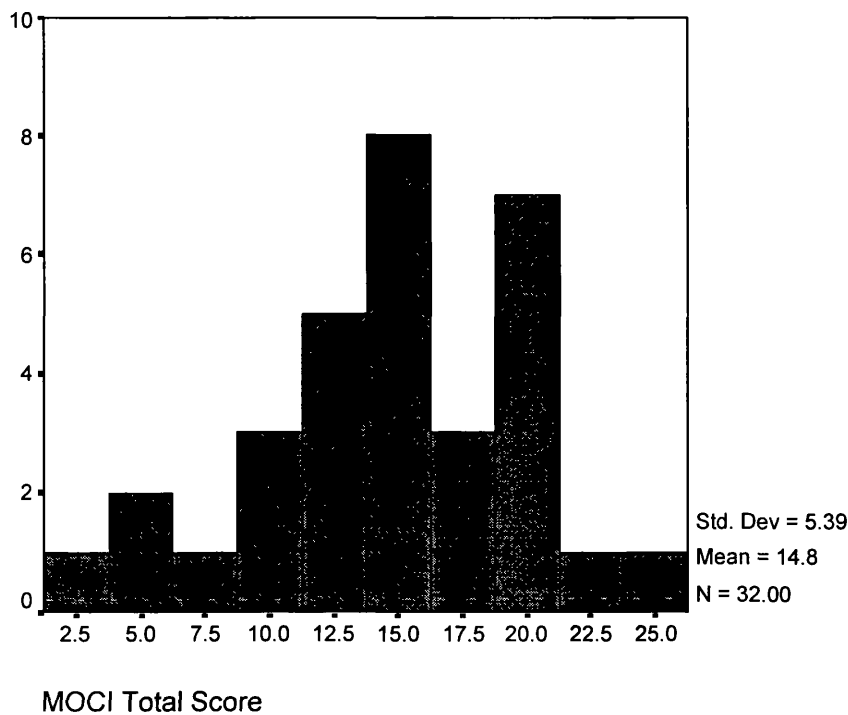


Figure 3.2 Histogram depicting scores on the MOCI measure of total severity.

As mentioned earlier, the 32 OCD participants came from three sources, a psychology clinic (6), by advertisement in an Obsessive Action newsletter (9), and by recruitment at an Obsessive Action annual conference (17). These subgroups were compared to check there were no differences in OCD severity. One-way ANOVAs demonstrated that any differences in the three groups were below significance level on the YBOCS ($F(2,29)=2.71, p=0.08$) and on the MOCI ($F(2,29)=2.80, p=0.08$). It is possible that genuine subgroup differences might have become apparent with a larger sample size. Nevertheless, as the distributions of the YBOCS and MOCI variables were adequately normal, it was considered reasonable to treat the 32 participants as a single OCD group for the purposes of this study. The subgroups of origin were therefore not considered further.

3.2.2 *OCD Subtypes*

The Maudsley Obsessive Compulsive Inventory (MOCI) also provided subscales for checking and washing compulsions. In total, 21/32 (66%) scored at the 5-point cutoff or greater on the checking subscale of the MOCI, and 11/32 (34%) scored at the 5-point cutoff or greater on the washing subscale of the MOCI. It was found that 8/32 scored above the 5-point cutoff on *both* checking and washing subscales.

3.2.3 *Duration of Symptoms*

Age of onset ranged from 4 to 59 years, with mean age 18.4 years, s.d. 10.1 years. However, in the majority of cases, an official diagnosis had only been given more recently, and the age of onset reflected a retrospective judgement on the part of the participant. Assuming accuracy of these judgements, the duration of symptoms (i.e. time since onset) ranged from 4 to 57 years, with mean 22.9 years, s.d. 12.0 years. (In this calculation no account was taken of any periods of remission. Most participants reported significant symptomatology since onset, albeit often with a fluctuating course.)

3.2.4 *Anxiety*

On the Hospital Anxiety and Depression Scale (HADS), anxiety scores ranged from 6 to 20, mean 12.5, s.d. 4.3. Of the sample, 27/32 (84%) scored above the 8 point cut-off for anxiety symptomatology. On the Kolmogorov-Smirnov test, anxiety was found to be adequately normally distributed ($K(32) = 0.13, p=0.17$).

3.2.5 Depression

On the Hospital Anxiety and Depression Scale (HADS), depression scores ranged from 0 to 15, mean 7.5, s.d. 3.7. Of the sample, 14/32 (44%) scored above the 8 point cut-off for depression symptomatology. On the Kolmogorov-Smirnov test, depression was found to be adequately normally distributed ($K(32) = 0.11, p=0.20$).

3.2.6 OBQ Belief Ratings

Scores on the six subscales of the Obsessive Beliefs Questionnaire (OBQ) are presented in Table 3.1, alongside the corresponding psychometrics reported by the OCCWG (2001).

Table 3.1 Belief ratings on the six subscales of the OBQ.

OBQ subscale	OCD group (n=32) Mean [s.d.]	OCCWG (n=100) Mean [s.d.]
Intolerance of Uncertainty	55.8 [14.5]	56.8 [16.1]
Overestimation of Threat	60.6 [21.2]	61.3 [19.7]
Control of thoughts	60.9 [19.6]	62.5 [20.3]
Importance of thoughts	46.5 [22.8]	46.4 [20.6]
Responsibility	68.0 [21.1]	71.9 [20.0]
Perfectionism	66.8 [21.4]	64.1 [22.9]

On the Kolmogorov-Smirnov test, the OBQ-R was found to deviate from a normal distribution ($K(32) = 0.16, p=0.03$). However, as can be observed from the histogram of OBQ-R (Figure 3.3), the distribution is essentially symmetrical and uni-modal (although an unexpected ‘gap’ appears in the distribution). It is noted that no evidence from previous studies suggests this variable deviates from normality (e.g.

OCCWG, 2001). Furthermore, it is known that parametric tests are robust to some divergence from normality, and it was therefore decided that the OBQ-R did not deviate sufficiently from normality to warrant any use of non-parametric tests in this study.

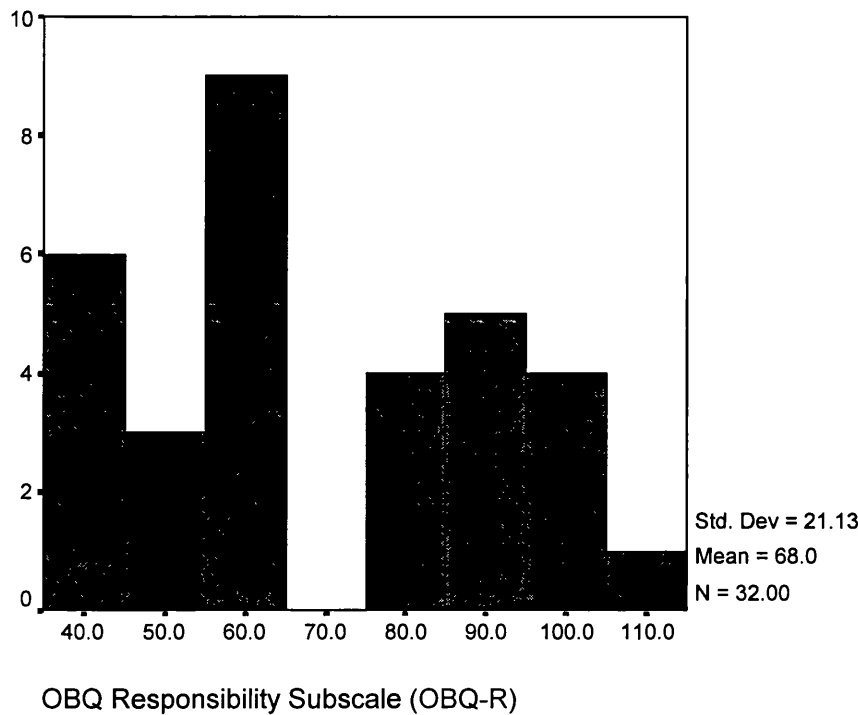


Figure 3.3 Histogram depicting scores on the OBQ-R.

3.2.7 Experience of Therapy

18/32 (56%) of the sample had had exposure to some degree of therapy for obsessive compulsive disorder. Precise data on the nature and/or duration of therapy were not available, but from participants' descriptions a variety of approaches were experienced, including brief counselling, behavioural programmes (both inpatient and outpatient types), cognitive-behavioural therapy, and psychodynamic psychotherapy. Several participants had experienced a multiplicity of approaches, and some reported an associated subjective improvement in one or more aspects of their psychological

well-being. A minority of the participants were currently undergoing some form of psychological therapy. Additionally, many of the group were either currently or had previously taken some medication for their obsessive-compulsive problems or for depression.

3.2.8 *Reasons for Participation*

OCD participants were asked briefly (at the end of the schedule) for their reasons for volunteering in the study. Reasons given included 'wanting to help others with OCD', 'personal interest', and 'wanting to get involved in the latest research'. Several participants mentioned that they had previously, or were currently volunteering for other research studies on OCD.

3.3 Tests of Main Hypotheses

3.3.1 *Test of Hypothesis 1.*

Hypothesis - On average, it is expected that the 'Self' ratings will be higher than the 'Other' ratings in the OCD group but not in the control group on (a) the SCORES responsibility ratings, and (b) the responsibility beliefs on the OBQ.

(a) SCORES ratings

A multivariate mixed factorial ANOVA was conducted on the responsibility ratings of the SCORES (i.e. the SELF-RESP and OTHERS-RESP components), with *group* as the between-subjects factor and *self-other* as the within-subjects factor. This test confirmed a significant *group X self-other* interaction (Wilks' Lambda=0.596, $F(1,62)=42.05$, $p<0.001$) and post-hoc analyses showed a self-other discrepancy in the

OCD group ($t(31)=7.54$, $p<0.001$) and no significant discrepancy in the control group ($t(37)=0.18$, $p=0.85$). These results therefore strongly supported the hypothesis. A bar-chart showing the relevant ratings is shown in Figure 3.4 below. A further post-hoc independent samples t-test revealed that the ‘other’ rating given by the OCD group did not differ significantly from the ‘self’ rating given by controls ($t(62)=1.83$, $p=0.07$). This suggests that, on average, the OCD group are ‘accurate’ in estimating others’ ratings.

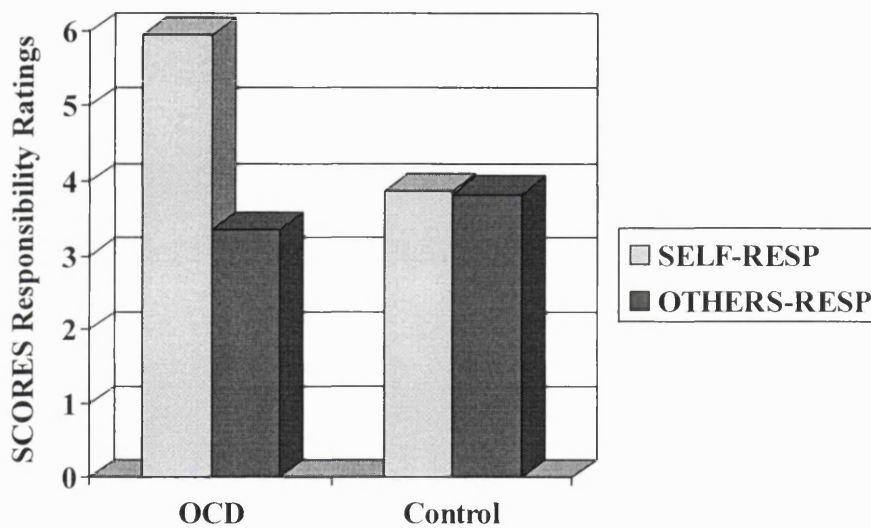


Figure 3.4 Average SELF-RESP and OTHERS-RESP ratings on the SCORES.

Of supplementary interest were the ratings on the other five emotional reactions of the SCORES, namely ‘sad’, ‘guilty’, ‘angry with self’, ‘worried’ and ‘ashamed’. Post-hoc analyses using Bonferroni correction factors revealed similar significant self-other discrepancies on these other five emotions amongst the OCD group, and not for the control group. The relevant statistics are given in Table 3.2 below. Furthermore, amongst the OCD group, post-hoc analyses demonstrated significant intercorrelations between the six self-other discrepancies, with Pearson product moment correlation

coefficients ranging from $r=0.695$ to $r=0.912$. Of the six reactions, however, responsibility was observed to produce the largest self-other discrepancy, and post-hoc t-tests were conducted with Bonferroni corrections to examine whether this was significant. These tests showed the responsibility discrepancy to be significantly greater than that of 'sad' ($t(31)=4.78$, $p<0.001$), 'angry' ($t(31)=4.62$, $p<0.001$) and 'ashamed' ($t(31)=7.61$, $p<0.001$) but not to be significantly greater than the discrepancies for 'guilty' ($t(31)=0.60$, $p=0.55$) and 'worried' ($t(31)=1.25$, $p=0.22$).

Table 3.2 Post-hoc 'Self-Other' comparisons on six reactions of the SCORES

Comparisons	OCD group	Control group
SELF-SAD > OTHERS-SAD	$t(31)=4.55$, $p<0.001$	$t(31)=0.09$, $p=0.93$
SELF-GUIL > OTHERS-GUIL	$t(31)=7.01$, $p<0.001$	$t(31)=-0.32$, $p=0.76$
SELF-ANGR > OTHERS-ANGR	$t(31)=5.32$, $p<0.001$	$t(31)=-1.00$, $p=0.32$
SELF-WORR > OTHERS-WORR	$t(31)=7.23$, $p<0.001$	$t(31)=0.42$, $p=0.68$
SELF-RESP > OTHERS-RESP	$t(31)=7.55$, $p<0.001$	$t(31)=0.18$, $p=0.86$
SELF-ASHA > OTHERS-ASHA	$t(31)=4.18$, $p<0.001$	$t(31)=-2.03$, $p=0.05$

(b) Responsibility beliefs on the OBQ

A multivariate mixed factorial ANOVA was conducted on the responsibility belief ratings of the OBQ, with *group* as the between-subjects factor and *self-other* as the within-subjects factor. This test confirmed a significant *group X self-other* interaction (Wilks' Lambda=0.593, $F(1,62)=42.52$, $p<0.001$) and post-hoc analyses showed a self-other discrepancy in the OCD group ($t(31)=8.99$, $p<0.001$) and no significant discrepancy in the control group ($t(31)=-0.15$, $p=0.88$). These results therefore strongly supported the hypothesis. A bar-chart showing the relevant ratings is shown in Figure 3.5 below. A post-hoc independent samples t-test revealed that the 'other'

rating given by the OCD group did not differ significantly from the 'self' rating given by controls ($t(62)=0.50$, $p=0.62$). This suggests that, on average, the OCD group are 'accurate' in estimating others' ratings on the responsibility beliefs.

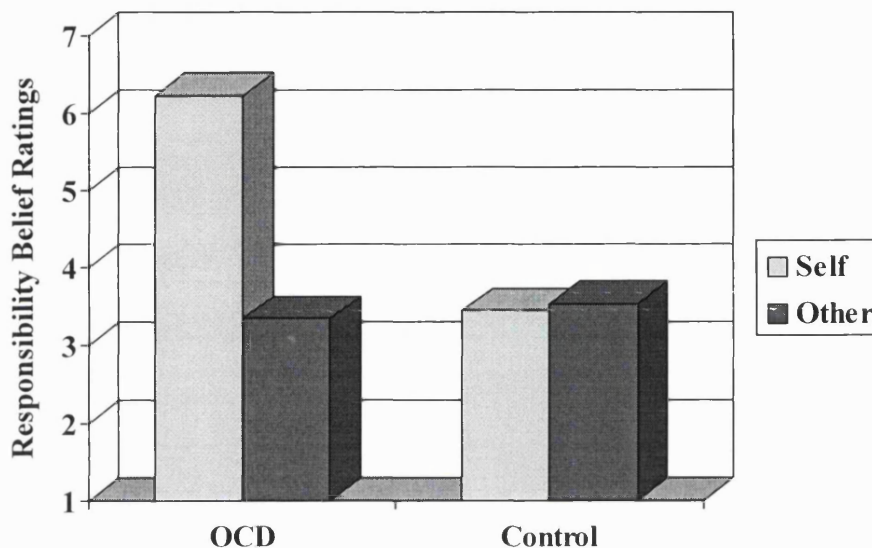


Figure 3.5 Average 'Self' and 'Other' Responsibility Belief Ratings on the OBQ.

Of supplementary interest was whether similar results would hold for the other belief domains of the OBQ. With all six belief domains taken together, paired samples *t*-tests showed that there was a significant difference between 'self' and 'other' ratings in the OCD group ($t(31)=12.52$, $p<0.001$), but no significant difference between 'self' and 'other' ratings in the control group ($t(31)=1.89$, $p=0.07$). Furthermore, an independent samples *t*-test showed no significant difference between 'other' ratings given by the OCD group and 'self' ratings given by the control group ($t(62)=0.87$, $p=0.39$). These results suggest that a similar profile of average ratings are obtained with all six belief domains taken together as with the responsibility beliefs alone.

3.3.2 Test of Hypothesis 2.

Amongst the OCD group, higher responsibility levels will be associated with more severe levels of OCD.

This hypothesis was first examined by using the responsibility subscale of the Obsessive Beliefs Questionnaire (OBQ-R). OCD severity ratings were taken from the YBOCS total score. It was found that responsibility and severity were significantly correlated ($r=0.45$, $p=0.01$), responsibility accounting for 20% of the variance in severity. When the MOCI total score was used instead as the severity measure, there was still a significant correlation between responsibility belief ratings and severity ($r=0.44$, $p=0.01$), with responsibility accounting for 19% of the variance in severity. These findings therefore gave support to the hypothesis.

The hypothesis was also examined by using the SELF-RESP variable on the SCORES, as a measure of responsibility. A slightly weaker, though significant correlation was found with severity on the YBOCS ($r=0.37$, $p=0.04$), this time accounting for 13% of the variance in severity. However, when the MOCI total score was used instead as the severity measure, the correlation was no longer significant ($r=0.16$, $p=0.38$). These findings therefore lend partial support to the hypothesis.

Of further interest was whether the combined predictive power of the two responsibility variables (OBQ-R and SELF-RESP) on YBOCS severity scores would be greater than each variable alone. To test this, a hierarchical regression was conducted on YBOCS first with OBQ-R alone and then with OBQ-R and SELF-RESP as the independent variables. The variance explained rose from 20% to just

21%, and this change in variance was found not to be significant ($F(1,29)=0.54$, $p=0.47$). This suggests no further predictive power of SELF-RESP on severity scores over and above that provided by the OBQ-R responsibility beliefs.

An interesting corollary was to discover if responsibility was predictive of YBOCS severity scores over and above levels of anxiety and depression. Indeed, YBOCS scores were significantly correlated with both anxiety ($r=0.58$, $p<0.001$), and depression ($r=0.37$, $p=0.04$), as measured on the respective subscales of the HADS. Therefore, to determine if responsibility provided an independent contribution over and above anxiety and depression, the variables were entered into a hierarchical regression. When anxiety was entered alone, it accounted for 34% of the variance of YBOCS. When anxiety and depression were entered together, the variance explained rose by just 0.1%, and this change in variance was found not to be significant ($F(1,29)=0.03$, $p=0.87$). When anxiety and responsibility belief ratings (OBQ-R) were entered together, the variance explained rose by 0.6%. This change in variance was also found not to be significant ($F(1,29)=0.26$, $p=0.61$). When anxiety and the SELF-RESP variable from the SCORES were entered together into the regression, the variance of severity accounted for rose by 0.1%, and once again this change was not significant ($F(1,29)=0.02$, $p=0.88$). Therefore, whilst responsibility is associated with severity levels in the OCD group, there is no evidence that it predicts severity of OCD independently of general levels of anxiety. The results of these regression analyses are summarised in Table 3.3 below.

Table 3.3 Regression analyses on severity (YBOCS), with independent variables of responsibility (OBQ-R, SELF-RESP), anxiety and depression.

Independent variables predicting severity	Beta	R ²	Adjusted R ²	Change in R ²	Significance of change
OBQ-R alone	0.45	0.20	0.17	0.20	F(1,30)=7.48, p=0.01
SELF-RESP alone	0.37	0.13	0.11	0.13	F(1,30)=4.68, p=0.04
OBQ-R SELF-RESP	0.35 0.15	0.20 0.21	0.17 0.16	0.20 0.01	F(1,29)=0.54, p=0.47
Anxiety alone	0.58	0.34	0.32	0.34	F(1,30)=15.32, p<0.001
Anxiety Depression	0.56 0.03	0.34 0.34	0.32 0.29	0.34 0.001	F(1,29)=0.03, p=0.87
Anxiety OBQ-R	0.51 0.10	0.34 0.34	0.32 0.30	0.34 0.006	F(1,29)=0.26, p=0.61
Anxiety SELF-RESP	0.56 0.03	0.34 0.34	0.32 0.29	0.34 0.001	F(1,29)=0.02, p=0.88

3.3.3 Test of Hypothesis 3.

Poorer responsibility insight as measured on the SCORES will be associated with more severe levels of OCD.

It was found that the OTHERS-RESP component on the SCORES correlated significantly with the YBOCS severity score ($r=0.46$, $p=0.009$), and alone accounted for 21% of the variance in severity. This result is therefore supportive of the hypothesis.

The hypothesis was also tested using the MOCI total score as the severity measure, instead of the YBOCS. However, in this case, there was found to be no significant correlation between OTHERS-RESP and the MOCI ($r=0.09$, $p=0.64$). In contrast with the previous result, this finding does not support the hypothesis.

Together, these findings therefore lend partial support to the hypothesis that responsibility insight as measured on the SCORES is associated with greater severity of OCD. The disparity in results between the tests using the YBOCS and MOCI is addressed in detail in the discussion.

3.3.4 Test of hypothesis 4.

Further alternative hypotheses suggest that:

- (a) responsibility insight is associated with severity as a function of its association with responsibility.**
- (b) responsibility insight moderates the relationship between responsibility and severity.**
- (c) responsibility insight is associated with severity independently of responsibility.**

In light of the results of the previous hypothesis, the YBOCS was used as the severity measure, and the MOCI was not considered further. Both SELF-RESP and OBQ-R were considered as measures of responsibility.

The correlation between OTHERS-RESP and SELF-RESP was below significance level ($r=0.28$, $p=0.13$), as was the correlation between OTHERS-RESP and OBQ-R ($r=0.33$, $p=0.07$). Furthermore, the partial correlation of OTHERS-RESP with YBOCS, controlling for SELF-RESP, was significant ($r=0.40$, $p=0.03$), as was the partial correlation of OTHERS-RESP with YBOCS controlling for OBQ-R ($r=0.36$, $p=0.04$). These results therefore provided no evidence for hypothesis (a), but instead

evidence for hypothesis (c), i.e. that OTHERS-RESP is associated with severity *independently* of responsibility levels. To test hypothesis (b), a multiple regression was conducted on YBOCS, with OBQ-R and OTHERS-RESP as independent variables together with an interaction term consisting of the multiplicative product of OBQ-R and OTHERS-RESP. This procedure demonstrated no significant interaction effect ($F(1,28)=0.01$, $p=0.93$), therefore suggesting no evidence of a moderating effect of responsibility insight upon the responsibility-severity association. Therefore, hypothesis (c) derives most support from these results.

To determine the independent predictive value of responsibility and responsibility insight, a hierarchical regression was conducted, with YBOCS as the dependent variable and OBQ-R and OTHERS-RESP as the independent variables. When OBQ-R was entered alone, the variance in severity accounted for was 20%. When both variables were entered, this figure rose to 31%, and the change was found to be significant ($F(1,29)=4.45$, $p=0.04$).

Finally, it was decided to examine whether OTHERS-RESP would still be predictive of severity after controlling for the other major associated variable, anxiety. Another hierarchical regression demonstrated that with anxiety entered alone, the variance in severity accounted for was 34%, but this figure rose to 48% when anxiety and OTHERS-RESP were entered together. This change in variance was significant ($F(1,29)=7.69$, $p=0.01$). These results therefore suggest that responsibility insight, as measured on the SCORES, is predictive of OCD severity, independently of responsibility levels and of general anxiety levels. The results of these regression analyses are presented in Table 3.4 below.

Table 3.4 Regression analyses on severity (YBOCS), with independent variables of responsibility (OBQ-R), responsibility insight (OTHERS-RESP) and anxiety.

Independent variables predicting severity	Beta	R ²	Adjusted R ²	Change in R ²	Significance of change
OBQ-R alone	0.45	0.20	0.17	0.20	F(1,30)=7.48, p=0.01
OTHERS-RESP alone	0.46	0.21	0.18	0.21	F(1,30)=7.81, p=0.009
OBQ-R	0.33	0.20	0.17	0.20	F(1,29)=4.45, p=0.04
OTHERS-RESP	0.35	0.31	0.26	0.11	
Anxiety alone	0.58	0.34	0.32	0.34	F(1,30)=15.32, p<0.001
Anxiety	0.53	0.34	0.32	0.34	F(1,29)=7.69, p=0.01
OTHERS-RESP	0.38	0.48	0.44	0.14	

3.3.5 Test of hypothesis 5.

Hypotheses 3 and 4 will also hold when responsibility insight is instead measured using the belief ratings approach.

The other putative measure of responsibility insight, the ‘others’ ratings for the responsibility beliefs, was also examined in relation to OCD severity, in a supplementary test of hypothesis 3. However, the correlation between this variable and YBOCS severity scores was weak, and failed to reach significance level ($r=0.07$, $p=0.71$). Therefore this measure of responsibility insight appears to behave differently from the OTHERS-RESP variable of the SCORES, and provides no evidence to support the hypothesis that responsibility insight is predictive of OCD severity. Further analysis showed that this putative measure of responsibility insight was in fact not significantly correlated with OTHERS-RESP ($r=0.06$, $p=0.76$). A

summary of this and the other main correlations between measures of severity, anxiety, responsibility and responsibility insight is provided in Table 3.5 below.

Table 3.5 Correlations between severity measures (YBOCS, MOCI), anxiety, responsibility measures (OBQ-R, SELF-RESP), and responsibility insight measures (OTHERS-RESP, Others Beliefs).

	YBOCS	MOCI	Anxiety	OBQ-R	SELF-RESP	OTHERS-RESP	Others beliefs
YBOCS	r=1.00	r=0.32 p=0.08	r=0.58 p<0.001	r=0.45 p=0.01	r=0.37 p=0.04	r=0.46 p=0.01	r=0.07 p=0.70
MOCI	r=0.32 p=0.08	r=1.00	r=0.59 p<0.001	r=0.44 p=0.01	r=0.16 p=0.38	r=0.09 p=0.63	r=0.03 p=0.87
Anxiety	r=0.58 p<0.001	r=0.59 p<0.001	r=1.00	r=0.67 p<0.001	r=0.60 p<0.001	r=0.15 p=0.42	r=-0.17 p=0.35
OBQ-R	r=0.45 p=0.01	r=0.44 p=0.01	r=0.67 p<0.001	r=1.00	r=0.61 p<0.001	r=0.33 p=0.07	r=-0.05 p=0.80
SELF-RESP	r=0.37 p=0.04	r=0.16 p=0.38	r=0.60 p<0.001	r=0.61 p<0.001	r=1.00	r=0.33 p=0.07	r=-0.02 p=0.91
OTHERS-RESP	r=0.46 p=0.01	r=0.09 p=0.63	r=0.15 p=0.42	r=0.33 p=0.07	r=0.33 p=0.07	r=1.00	r=0.06 p=0.76
'Others' beliefs	r=0.07 p=0.70	r=0.03 p=0.87	r=-0.17 p=0.35	r=-0.05 p=0.80	r=-0.02 p=0.91	r=0.06 p=0.76	r=1.00

3.4 Tests of Subsidiary Hypotheses

3.4.1 Test of Hypothesis 5.

Hypothesis - Experience of therapy is expected to be associated with greater responsibility insight.

An independent samples t-test was conducted to compare the subgroup who had had some experience of therapy with those who had not. Contrary to expectation, it was found that the therapy group showed a significantly higher rating on the OTHERS-RESP variable of the SCORES, ($t(30)=2.18$, $p=0.04$), i.e. showed *poorer* responsibility insight. The therapy and non-therapy groups were compared to determine if severity of OCD was a confounding factor. However, an independent samples t-test revealed no significant difference in YBOCS severity scores between the two groups ($t(30)=1.06$, $p=0.30$). This suggests that differences in severity cannot account for the poorer responsibility insight found in the therapy group.

The two groups were also compared on the other measure of responsibility insight, the others' ratings on the responsibility beliefs. However, an independent samples t-test showed no significant difference in these responsibility insight ratings between the therapy and non-therapy groups ($t(30)=0.78$, $p=0.44$). These results are summarised in Table 3.6 below.

Table 3.6 Summary of comparisons between 'therapy' and 'non-therapy' subgroups.

Variable	'Therapy' group (n=18) Mean [s.d.]	'Non-therapy' group (n=14) Mean [s.d.]	Comparison
OTHERS-RESP	3.67 [0.92]	2.95 [0.93]	$t(30)=2.18$, $p=0.04$
YBOCS (severity)	24.2 [5.1]	22.3 [4.9]	$t(30)=1.06$, $p=0.30$
'Others' belief ratings	3.53 [1.47]	3.11 [1.57]	$t(30)=0.78$, $p=0.44$

3.4.2 Test of Hypothesis 6.

Hypothesis - Duration of illness might be associated with poorer responsibility insight.

Duration of illness was found not to be significantly associated with poorer responsibility insight on the OTHERS-RESP component of the SCORES ($r=0.28$, $p=0.12$). Furthermore, duration of illness was not significantly associated with OCD severity on the YBOCS ($r=0.01$, $p=0.95$). Therefore no evidence supports this hypothesis.

Chapter 4. Discussion

4.1 Summary of Findings

This investigation employed two approaches to investigate the notion of insight in OCD, relating to underlying obsessional beliefs and in particular to the concept of responsibility insight. The first approach involved the development of a new scale which produced a measure of general responsibility as well as a putative measure of responsibility insight. The second approach was based on direct ratings of known obsessional beliefs. Common to each approach was the principle that requesting an individual's own response *and* their opinion as to how the average person on the street would respond, would yield valuable information as to that individual's level of insight.

The main findings of this study can be summarised as follows:

- People with OCD on average demonstrated a significant discrepancy between 'self' and 'other' ratings on the SCORES responsibility reactions and on responsibility beliefs taken from the OBQ.
- As predicted in the literature, higher responsibility levels were found to be associated with more severe levels of OCD, using both the OBQ-R and the SELF-RESP component of the SCORES. This result held when severity was measured using the YBOCS and using the MOCI. However, interestingly, responsibility did not appear to predict severity independently of anxiety.

- Poorer responsibility insight, measured on the SCORES, was found to be predictive of OCD severity measured on the YBOCS. However, this result did not hold when severity was measured on the MOCI.
- The association between responsibility insight and severity of OCD was found to be independent of responsibility levels.
- When responsibility insight was measured using the ‘other’ ratings on responsibility beliefs, the prediction of severity was not evident. Furthermore this measure of responsibility insight did not correlate well with the SCORES measure (OTHERS-RESP).

In addition, the findings of the subsidiary hypotheses can be summarised as follows:

- Contrary to expectations, the subgroup who had received therapy actually showed a *poorer* level of responsibility insight on the SCORES than the subgroup who had not received therapy, although these groups did not differ significantly in severity of OCD.
- No evidence was found that duration of illness was associated with poorer responsibility insight, or more severe OCD.

4.2 Interpretations of Findings

4.2.1 Existence of Insight

This study found that on average, participants with OCD were readily able to identify a difference between themselves and others on ratings of responsibility beliefs, as well as the other domains of obsessional belief. Furthermore, on the newly devised

SCORES, which asked for ‘self’ and ‘other’ reactions to a variety of scenarios with a theme of responsibility for harm, a similar difference was identifiable. Subsequent analysis showed also that, on average, the OCD group were ‘accurate’ in their estimation of others’ reactions. Together, these results were taken to indicate the existence of good responsibility insight in the OCD group as a whole. Although perhaps not a surprising finding, it was an important starting point before attempting to operationalise the responsibility insight construct and examining any associations with other variables.

Insight is an inherently problematic construct to operationalise, as by definition it will not be satisfactorily detected by direct self-report, and therefore some indirect approach is required. The strategy adopted in this study was to access the insight construct by asking respondents to indicate how they believed the ‘average person in the street’ would respond or react, alongside their own reactions. This ‘self-other’ methodology seemed to possess good face validity, as logic dictated that those who had little insight would fail to recognise that others might respond or react in a less exaggerated or inflated manner. Put another way, those with poorer insight would be attributing their own inflated responses externally, i.e. more to the situation, and less to themselves. Indeed, comments from some of the participants offered qualitative support to the existence of such attributional differences. One participant commented on a scenario from the SCORES “*That is a dreadful situation to be in*”, whereas another commented “*Knowing me, I would feel extremely responsible*”. The first could be argued to reflect an external attribution and lower responsibility insight, whereas the second might reflect an internal attribution and higher responsibility insight.

Nevertheless, the self-other methodology is perhaps prone to problems of response bias, in situations where it is perceived that a discrepancy is expected. For example, the Obsessive Beliefs Questionnaire (OBQ), from its name alone, suggests that the beliefs in question are particularly pertinent to those with OCD, and might tempt the respondent to assume that they would not be rated highly by the average person in the street. Similarly, a participant who is overwhelmed by the generalised belief “I’m different” or “I’m crazy”, may potentially let this belief dominate their responses to any number of more specific questions or situations. A stereotyped response pattern may then emerge, with high ratings for ‘self’ and low ratings for ‘other’ without specific individual consideration of the items in question. Such response biases are not uncommon in much self-report methodology, and possible solutions include the counterbalancing of items (e.g. the MOCI) or inclusion of unrelated ‘control’ items. The OBQ has not adopted either of these solutions, and it is possible that problems of response bias may affect both the OBQ itself, and the detection of ‘self’ and ‘other’ belief ratings in this study. However, the SCORES design may suffer less from such problems for several reasons. Firstly, the scenarios are more ‘everyday’ in that they are real life situations that could happen to anyone, and are less obviously related to specific OCD concerns. Secondly, the scenarios evidently encompass a range of severity of outcome, which would be perceived by those with and without OCD, so the temptation to engage in a stereotyped response pattern is greatly reduced. Thirdly, a range of emotional reactions is requested, some of which are more pertinent than others, and it is not explicit that the focus of study is on the responsibility ratings. Indeed, the instructions suggest simply that “People react to events in different ways”, and the name does not emphasise the focus of study (as would e.g. “*Inflated*

responsibility scale”). For these reasons, it is argued that the SCORES is less prone (though not necessarily immune) to problems of response bias.

4.2.2 Responsibility Predicted Severity of OCD

It was found that responsibility levels, as measured both by ratings on the OBQ-R and on the SELF-RESP component of the SCORES, predicted severity of OCD. Furthermore, this result held when severity was measured using the MOCI. These predictions are consistent with other studies (Salkovskis et al, 2000; OCCWG, 2001), and with the cognitive model of OCD (Salkovskis, 1985, 1989). Indeed, in this model, an inflated sense of responsibility for harm characterises the misinterpretation of intrusions, generating distress and anxiety, and motivating the individual to engage in neutralising and thought suppression strategies. This results in an amplification of the obsessional phenomena. According to the model, therefore, the strength of such feedback cycles, and thus the severity of OCD symptomatology should correlate with measurements of inflated responsibility for harm. The responsibility-severity associations in this study therefore support the model in this respect.

In addition, the finding that SELF-RESP predicted severity of OCD supports the idea that a *generalised* inflated responsibility bias may be operative, consistent with the concept of underlying assumptions of responsibility (Salkovskis et al, 2000; Wilson & Chambless, 1999). Indeed, the scenarios in the SCORES covered a range of everyday situations, and were not specifically tied to the obsessive concerns of any individual. This is an important issue, as some authors have questioned whether the relevant responsibility in OCD is in fact situation-specific, and does not represent a broad tendency which would be evident across a variety of situations (e.g. Rachman,

Thordarson, Shafran & Woody, 1995). Rachman et al (1995) argue for a situation-specific role for responsibility, citing evidence from their study on university students. This investigation found no link between obsessional symptoms and general responsibility factors such as responsibility for property damage (*"If I smelled smoke in a store it is up to me to inform the manager"*), responsibility in social contexts (*"I should not turn down an invitation from a friend"*) or responsibility for physical harm coming to others (*"When driving, it is up to me to make sure my passengers are wearing seat belts"*). The discrepancy of these findings may be explained in part by the tight definition of responsibility adopted by Salkovskis et al (2000), and in the present study, involving pivotal influence over negative outcomes. Therefore even the more surprising finding in the Rachman et al (1995) study that obsessionalism was unrelated to a factor specifically entailing responsibility for physical harm coming to others, may be explained by the lack of *pivotal* responsibility. By contrast, the scenarios on the SCORES were designed to imply a pivotal element to the responsibility. Therefore whilst responsibility does need to be tightly defined, there is nevertheless evidence supporting the notion of generalised underlying responsibility beliefs which are particularly relevant in OCD.

It was also found that when anxiety was controlled for, responsibility was no longer significantly predictive of OCD severity. However, this is not taken as an indication that responsibility is only relevant in OCD by virtue of its effect on general anxiety levels. Indeed, studies which have employed anxiety control groups such as those with generalised anxiety disorder (GAD) have shown that responsibility beliefs, and not anxiety, differentiate the two clinical groups (Salkovskis et al, 2000; OCCWG, 2001). The present study has merely shown that *within* an OCD group, state anxiety

levels are very closely entwined with OCD severity, to the extent that responsibility levels no longer predict severity independently of anxiety. In fact, this is consistent with the cognitive model, as anxiety is thought to be one of the direct precipitants of the responsibility misinterpretations.

4.2.3 Responsibility Insight on SCORES Predicted OCD Severity

One of the major and novel findings of this study was that poor responsibility insight, as measured on the SCORES, was found to be predictive of greater OCD severity, as measured by the YBOCS. Responsibility insight is a construct that has not been previously addressed in OCD, and naturally there are many important questions that need to be considered further, including issues of definition and validity. On the SCORES, responsibility insight was argued to be reflected in the person's estimation of others' ratings of responsibility. An inflated estimation of others' responsibility ratings (in the direction of their own ratings) was taken to represent poorer responsibility insight.

There are several possible explanations for this finding. Perhaps the most immediately appealing is that responsibility insight in some way provides the individual with OCD enough relevant self-awareness to make some specific changes, either mentally or behaviourally, to partially alleviate the condition. Conceivably, however, the direction of causality could be reversed. In principle someone with a more severe form of OCD could have a lifestyle which renders them less in touch with reality, perhaps by virtue of depression, reduced social contact and isolation. Indeed, several of the more severe participants in this study were unable to work, and some led an extremely restricted social life. Depression scores were also found to

correlate with OCD severity, and a hypothesised social withdrawal is quite plausible. However, this explanation is probably unlikely. Firstly, there was not a significant direct association between depression and responsibility insight, which would be expected if severity were to influence insight in this manner. Secondly, it is largely speculation whether being socially isolated would really guarantee poorer responsibility insight. It could equally be argued that the isolated person is *more* likely to feel alienated and different from the rest of the world, and thus might actually score higher on this type of insight measure.

Assuming, therefore, that responsibility insight influences severity in some manner, three possible processes might broadly be operating. Firstly, responsibility insight could be influencing severity via responsibility levels themselves. This might occur if the individual was able, on the basis of his or her responsibility insight, to re-evaluate or realign their notions of responsibility towards the perceived norm of others, thus scoring lower on responsibility self-reports and having a consequent reduction in severity. A second possibility is that responsibility insight *moderates* the effect of responsibility upon severity. This would occur, perhaps, if the individual did not possess the ability to readjust their instinctive responsibility beliefs (they might after all be very resistant to change) but could prevent these beliefs from affecting them so profoundly, maybe by rational self-talk (e.g. “*No hang on, I mustn’t think this is my responsibility*”). A third possibility is that responsibility insight could influence severity directly, and independently of responsibility altogether. This might occur, for example, by the individual with high responsibility insight learning sophisticated ways to avoid certain responsibility-inducing situations in the first place. These three

possibilities are not mutually exclusive. The theoretical relationships between these variables are illustrated in Figure 4.1 below.

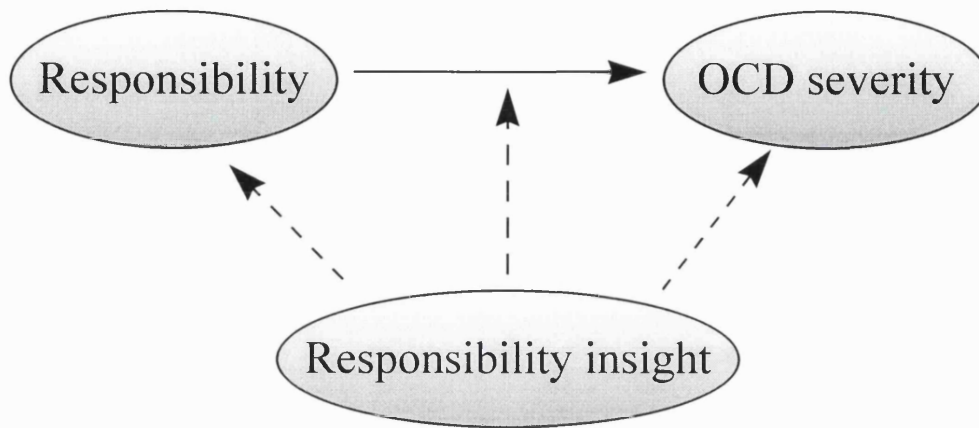


Figure 4.1 Possible action of responsibility insight on responsibility and severity

Results demonstrated little correlation between responsibility insight and responsibility, as measured either using belief ratings on the OBQ-R or using the SELF-RESP component of the SCORES. In general, those with greater responsibility insight did not also have lower responsibility scores. Furthermore, a regression conducted with responsibility insight as an interaction term suggested no evidence of a moderating role for responsibility insight on the effect of responsibility beliefs. Thus the evidence seemed to point to an independent route from responsibility insight to OCD severity (the right-hand arrow in Figure 4.1). Perhaps, therefore, the individual who has responsibility insight is not directly able to change the responsibility beliefs, which may be deep-rooted and instinctive, but is able to lessen the effect of their problems on their everyday lives. This might occur by sophisticated avoidance of particular responsibility-inducing situations, or perhaps by the increased

sense of control this insight brings to them. At this stage however, the precise mechanisms are unclear.

Another possible explanation for the apparent independence of responsibility insight and responsibility beliefs is that the individual may hold *positive* views about the value of responsibility, which prevent change occurring, despite awareness of the idiosyncrasy of this inflated responsibility. Wells & Matthews (1994) have discussed positive and negative beliefs surrounding rituals as a maintaining force; a parallel argument could perhaps be posited for beliefs about responsibility. Indeed, one participant in this study said explicitly that he knew he took much more responsibility than others, but “*at least someone is taking proper care*” and “*sometimes I can’t understand how other people can be so lax about things*”. Such comments imply that responsibility insight does not necessarily imply a negative view of the responsibility. Indeed, it is possible that such people view a high sense of responsibility as integral to their personality, and do not conceive of it as a feature of their disorder.

One way to investigate this possibility might be to extend the SCORES by asking respondents to provide not only ‘self’ and ‘other’ ratings, but also an ‘ideal self’ rating. There is an interesting parallel here with the repertory grid techniques used in Personal Construct Theory (Kelly, 1955), in which idiosyncratic construct dimensions and relationships are elicited by analysing construct ratings for self, ideal self and significant others. Indeed, application of this methodology might enrich the information gleaned from the SCORES. For example, it might be found that for some people, responsibility is closely associated with constructs of morality, kindness, or high self-esteem, suggesting a substantial impediment to change. This could be a

very valuable area of future study, as it could have a major impact upon how to address such issues in therapy.

Another finding from this study was that responsibility insight no longer predicted severity when the MOCI was used as the severity measure rather than the YBOCS. This is perhaps surprising, as psychometric studies have generally found a reasonable correlation between the two measures of around $r=0.57$ (Taylor, 1995), even though they are constructed very differently. However, a closer examination of the properties of the YBOCS and the MOCI might suggest an explanation for such differences.

Firstly, it is generally agreed that the MOCI does not address obsessional symptoms adequately, as the majority of items relate to cleaning and washing rituals (Goodman et al, 1989a). The cognitive model, by contrast, places the emphasis on the maintenance of the obsessional phenomena, with overt compulsive behaviour a secondary consequence seen in a subset of cases. Indeed, since the development of the MOCI (Hodgson & Rachman, 1977), epidemiological evidence has shown that obsessions without overt compulsions are much more common than previously believed (Weissman et al, 1994). For these individuals, therefore, the MOCI may provide a poor measure of true symptomatology. Furthermore, the MOCI employs a true/false response format which does not capture the intensity or interference of the symptoms. For example, the item "My major problem is repeated checking" would be endorsed both by those for whom checking was just a moderate annoyance and those for whom it was a severe and constantly disabling problem. The YBOCS, by contrast, elicits the major obsessive and compulsive symptoms and then rates these on specific dimensions of frequency, interference, distress, resistance and perceived

control. It would therefore be expected to provide a greater sensitivity to variations in subjective severity of a given array of symptoms (Taylor, 1995), especially within an OCD population. Therefore modest alterations in severity hypothesised to result from responsibility insight might be detected on the YBOCS but would be unlikely to show a large effect on the MOCI. Arguably with a much larger sample size, and thus greater statistical power, small effects might be visible even on the MOCI. However, it is also quite possible that responsibility insight does exert its influence primarily by cognitive means, for example by increasing a sense of cognitive control, which would be differentially detected by the YBOCS. Further research would be needed to elucidate the mechanisms of influence and test these hypotheses.

4.2.4 Responsibility Insight on Others' Belief Ratings did not Predict Severity

Another attempt was made in this study to measure responsibility insight, via others' ratings on responsibility beliefs taken from the OBQ. However, this variable was found not to predict OCD severity like the SCORES measure. Moreover, the correlation between the two measures of responsibility was weak. It seems likely, therefore, that the others' responsibility belief ratings constituted a poor measure of responsibility insight (although as the construct has not been independently defined or measured, this is difficult to verify). Several explanations for this suggest themselves.

Firstly, there may have been a response bias operating, a problem discussed earlier, which promotes the respondent to rate a series of items in a somewhat stereotyped manner (e.g. 'high' for self, 'low' for others). The ratings are then more reflective of a generalised idea of "being different" or "being crazy", rather than a considered view on the individual items. From qualitative observation, some participants did appear to

be completing the rating forms in this way, often characterised by rapid completion of responses in vertical lines. (Others, by contrast, took considerably longer and clearly processed each item on its own merits). Furthermore, the participants knew that the beliefs they were rating came from the Obsessive Beliefs Questionnaire, and although they were not provided with any specific details about the measure, the name alone might have suggested that they would be expected to mark 'low' for others' beliefs. As was argued earlier, the SCORES may have escaped such problems by a number of features in its design. This could therefore account for the weak correlation between the two measures. A future study might attempt to lessen any potential response bias by interpolating non-obsessional belief items, and/or reverse-coding some of the items.

Another possible explanation for these findings, however, is that direct self-other belief ratings are a poor way to access concepts of insight. The process of rating beliefs such as *"I should make sure others are protected from any negative consequences of my decisions or actions"* is, by its nature, an abstract and intellectual one. It is also a process that would probably seem unfamiliar to the majority of people. This is not to say that it cannot produce reliable and valid measures of underlying assumptions, as has been shown by the OBQ and related self-report measures. However, the estimation of *others'* responses to the beliefs might be altogether more difficult for the respondent, as the relevant information acquired from social experience would not be available in this abstract and intellectual form. It is more likely that such relevant social information would be gathered in the form of knowledge of others' specific reactions to everyday events. The SCORES method, therefore, is more likely to deliver useful and valid results, as it engages the

imagination by presenting everyday vignettes and requests specific emotional reactions for 'self' and 'other'. This analysis derives some support from qualitative observation in the study; several participants commented that it was difficult to imagine how the 'average person in the street' would respond to the beliefs, whereas fewer comments of this nature were received about completion of the SCORES.

A further consideration is that the beliefs may not in any case be stable across situations. For example, Miranda and Persons (1988) found that current mood states significantly influenced participant's self-report on a measure of dysfunctional attitudes using the Dysfunctional Attitude Scale (DAS; Weissman, 1979). This scale is similar in form to the OBQ used in this study, though the items consist of a variety of statements of 'dysfunctional thinking'. Miranda & Persons (1988) suggested that stable, 'trait-like' attitudes *did* exist, but that self-report of such attitudes was mood-state dependent. Furthermore, people with anxiety disorders often demonstrate 'dual' belief systems whereby the underlying beliefs emerge only when activated in a situation involving perceived threat (Beck & Emery, 1985). All belief ratings in this study were obtained in conditions in which the individual was in a relatively low state of anxiety, and thus might represent 'rational', 'insightful' or 'ideal' attitudes. It could be imagined that a different pattern of response might be obtained in a high anxious condition. An early proposal for this study involved an anxiety-induction procedure and a re-rating of beliefs, to test this possibility, but this was not conducted because of ceiling effects in the measurement and concern regarding the emotional effect on participants. Nevertheless, it is an important issue for any self-report instruments which claim to measure stable, underlying schemata. Research has not yet adequately addressed this subject.

4.2.5 Reliability and Validity of the SCORES

On the SCORES, an acceptable level of internal consistency was found for both the SELF-RESP and OTHERS-RESP components. This was an important finding as it suggests that some factors are being reliably measured across the scenarios, and that ratings are not merely representative of situation-specific reactions to an individual concern (e.g. harm to elderly people, or harm to children). It does not, of course, indicate that the ratings will be made reliably over time. For this, test-retest reliability data are required, although the study has not yet addressed this. This is an important area of future investigation, in order to ascertain the extent to which ratings might be affected by non-specific factors such as their general mood on the day.

The validity of each factor is also of great importance, particularly in guiding interpretation of the components. The SELF-RESP component has good face validity as a measure of general inflated responsibility, and it was found to possess good convergent validity with the OBQ-R. Divergent validity was good when correlated with all variables aside from anxiety. SELF-RESP correlated as highly with anxiety as with the OBQ-R. This raises the possibility that SELF-RESP is actually just measuring general anxiety levels. However, a more likely interpretation is that *within* an OCD group, anxiety and responsibility are highly correlated, and it is only when other control groups are included that the differences emerge. Indeed, the OBQ-R was equally highly correlated with anxiety, although evidence shows that an anxious control group scores lower on OBQ-R and the divergent properties of the measure are apparent (OCCWG, 2001). It would be expected that SELF-RESP would also receive lower scores when administered to anxious participants, and whilst this was not a

major aim of the present study, it would be a further valuable test of validity for this component of the SCORES.

The validity of the OTHERS-RESP component is harder to establish, as no previous attempts have been made to measure responsibility insight. An argument was made earlier to justify the interpretation of this component in terms of responsibility insight, with a higher rating of OTHERS-RESP representing a poorer insight. Unfortunately, the measure did not correlate well with the proposed measure of responsibility insight via the 'others' ratings on responsibility beliefs. However, as was suggested earlier, this other attempt to detect responsibility insight probably failed for a number of reasons including effects of response bias. The OTHERS-RESP component would achieve considerably more validity by correlation with an independent measure of responsibility insight. This might perhaps involve an improved attempt at measuring belief ratings, employing strategies to reduce response bias by the interpolation of non-specific beliefs and the reverse coding of half the items. However, it is conceivable, as mentioned earlier, that the relevant social information is not available for people to accurately appraise others' abstract beliefs in a meaningful way.

Whilst the OTHERS-RESP component may well measure responsibility insight, it is possible that some variance might be explained simply by the respondent's mental 'baseline' for how strongly others react to the scenarios. The visual analogue scale employed in the SCORES used various 'anchoring' labels, equally spaced, namely *'Not at all'*, *'a little'*, *'moderately'*, *'very'* and *'extremely'*. These were provided to aid consistency in ratings across participants. Furthermore, it seems unlikely that the 'mental baseline' effect is primary, as it is hard to explain why there should be a

correlation with OCD severity. Nevertheless, the interpretation of terms such as ‘*a little*’ might vary between individuals, and therefore there is a possibility that at least some variance in OTHERS-RESP is due to such effects. To control for this possibility, a future version of the SCORES might incorporate ‘control’ scenarios with no responsibility theme, and then the *difference* between ratings on control scenarios and responsibility scenarios could be scored rather than the absolute ratings. This might provide a purer measure of responsibility insight.

One peculiarity in the interpretation of OTHERS-RESP as responsibility insight emerges when comparisons are made with the non-OCD control group. It was actually found that neither the mean nor variance of OTHERS-RESP differed between OCD and control groups. At first sight, this might seem to cast doubt upon any interpretation in the OCD group in terms of responsibility insight. However, in the control group it was also found that OTHERS-RESP and SELF-RESP correlated well, suggesting these participants’ estimation of others’ reactions largely tracked their own reactions. In the OCD group, by contrast, OTHERS-RESP was found to be largely independent of SELF-RESP, arguably permitting an alternative interpretation of OTHERS-RESP as has been proposed in this study.

Whilst it is suggested in this study that high ratings of OTHERS-RESP reflect poorer responsibility insight, it is perhaps unclear how best to interpret very low ratings. Indeed, as the control data shows, the ‘average person on the street’ does indeed have some responsibility reaction to the scenarios, albeit a relatively low one. It could therefore be argued that an *underestimation* of others’ responses reflects a different form of poor insight, in which a lack of awareness is being shown that others do

indeed feel responsible to a degree. Put another way, these people are over-attributing responsibility reaction to their own personal characteristics rather than any inherent properties of the scenarios. Although logically correct, and potentially important, this type of poor insight was not the major focus of the current study. The main aim was to measure the extent to which people recognise others' reactions as different from their own. With a much larger sample size, it might be interesting to separate these two groups out (the "overestimators" and the "underestimators" of others' reactions) and consider the effects separately.

4.2.6 'Therapy' Group Have Poorer Responsibility Insight

One of the subsidiary findings of this study was that the subgroup of OCD participants who had had some exposure to therapy actually had poorer responsibility insight, as measured on the SCORES. The anticipated result was the reverse, i.e. exposure to therapy would have been expected to produce an increase in responsibility insight. Although this was not central to the study, it does require some explanation.

A direct confound with severity was ruled out, as it was found that the 'therapy' and 'non-therapy' groups did not differ in overall OCD severity. However, one possibility is that the subgroup with exposure to therapy were *originally* a more severe group, with poorer responsibility insight. Their exposure to therapy might have reduced their severity scores, in some cases, to the extent where any differences in severity were not apparent. Depending on the exact nature of the therapy, insight levels might or might not have changed. Indeed, from informal discussion it appeared that few of the therapy group had experienced cognitive therapy; the majority had experienced

behavioural therapy or counselling. It might be speculated therefore that such therapeutic experiences did not explicitly address notions of inflated responsibility, and therefore any symptom reduction might not have been accompanied by a corresponding increase in responsibility insight. Whilst a plausible hypothesis, this is difficult to verify as precise descriptions of the therapies were not available in systematic form, and no data beyond an anecdotal level was available on pre-morbid OCD severity.

Another possibility was that the ‘therapy’ group were essentially a group of ‘treatment failures’. Certainly their treatment had not been sufficient to reduce their symptomatology below diagnostic threshold levels. Their poor responsibility insight might conceivably have been a significant factor in preventing them from benefiting from therapy. It is noted that Foa (1979) previously found poor symptom insight to characterise one group of treatment failures in behavioural therapy. However, this hypothesis is largely speculative, as no accurate data were available on the extent of therapeutic success in the ‘therapy’ group in this study.

A third explanation for the ‘therapy’ group having poorer responsibility insight was that those who had experienced therapy were more ‘immersed’ in OCD culture, and would therefore tend to perceive others as more similar to themselves. Indeed, therapy might well have involved some ‘normalising’ component, perhaps aimed at reassuring the person that other people did experience similar thoughts/ feelings/ behaviours to themselves, and that they were not the only one in the world, or crazy. This immersion might have the effect of decreasing the salience of the overall “I’m different, I’m crazy” belief alluded to earlier, together with a consequent apparent

reduction in responsibility insight. Moreover, this effect would very plausibly stem from a range of different styles of therapy.

4.3 Implications for Models and Treatment

The findings of this study with respect to the effect of inflated responsibility in OCD lend broad support to the cognitive model (Salkovskis, 1985, 1989). As expected, strength of responsibility beliefs was predictive of severity of OCD, consistent with the assertion that appraisals of intrusions involving an inflated sense of responsibility are the primary source of distress, anxiety, motivation to neutralise, in turn maintaining the disorder.

However, the responsibility model makes no reference to the role of responsibility insight, or indeed any cognitive beliefs or appraisal about the inflated responsibility itself. This study demonstrates not only the overall existence of such insight, but an association with severity of the disorder, independent of responsibility levels themselves. Ideally, therefore, the model may require refinement to incorporate the influence of responsibility insight.

The model also says little about the *maintenance* of the responsibility beliefs. Salkovskis (1985) terms them ‘assumptions’ which are believed to reflect a relatively stable tendency to assume responsibility in a given situation. However, the existence of responsibility insight suggests that such assumptions are likely to be questioned, and therefore a coherent explanation is needed to explain their maintenance. One possibility is the existence of *positive* beliefs about responsibility, maybe involving the association with other valued personal characteristics. Wells & Matthews (1994)

have, in another cognitive model, hypothesised positive and negative beliefs about rituals as an important factor in their maintenance; a parallel argument could be applied to responsibility beliefs. Research is needed to test these ideas, but the cognitive model could be enhanced by such inquiry.

The association of responsibility insight with severity of OCD suggests that it might be beneficial in therapy to incorporate a psycho-educational component addressing the notion of inflated responsibility. This has already been suggested by others (e.g. Salkovskis, 1999). However, it is not known at this stage whether such responsibility insight would be easily acquired in this way. It is possible that levels of responsibility insight might form part of a relatively stable learned view of the world through particular social experience, or via an individual's more general capacity for 'psychological self-reflection'. If the reliability and validity of a responsibility insight measure such as the SCORES were to be well established, this question could be tested directly by experimental manipulation.

Also relevant for treatment, however, is the finding that the influence of responsibility insight on severity was independent of responsibility levels. This suggests that the raising of insight in therapy, whilst beneficial, may not be sufficient to alter the central responsibility beliefs. One hypothesis to explain this, as mentioned earlier, is that some individuals regard their high level of responsibility as a *positive* trait. This hypothesis is as yet untested, but if true it would suggest that therapy ascertain the precise idiosyncratic (positive and negative) beliefs surrounding responsibility, prior to some careful cognitive restructuring. For example, the individual might associate

responsibility with a moral dimension (e.g. “*Being ultra-responsible is a sign of good character*”) or a state of well-being (e.g. “*At least everyone can sleep easy at night*”).

4.4 Limitations of the Study

This section summarises the main limitations of the present study, some of which have already been alluded to.

4.4.1 Selection Bias Effects

In order to generalise the findings of this study to the wider OCD population, it is necessary to consider any potential effects of selection bias. In OCD research, this is a particular problem as epidemiological studies have shown that only a small minority of those who meet criteria for OCD in the general population ever present to services or volunteer for research. For this reason, OCD has been described as a ‘hidden disorder’.

Participants in this study came both from a specialist outpatient clinic treating people with OCD and from advertisement and recruitment via a national charity organisation for people with OCD, Obsessive Action. It is possible that those who were members of Obsessive Action, and in particular the subset who volunteered to participate were less prone to the effects of shame that surrounds the disorder as a whole. However, there is no reason to believe that this factor would significantly confound the findings of this study.

Several of the participants also cited their desire to help other people as a reason for participating, and many had participated in a variety of other research projects on

OCD. Once again, a selection bias could be postulated here, although this is speculative and there seems no direct link with the nature of the phenomena under investigation.

Despite these hypothetical biases in the participant sample, key demographic variables of age, sex, years of education showed means and standard deviations similar to other typical studies in the literature. Likewise, severity scores on the YBOCS and MOCI, and belief ratings on the OBQ differed little from comparable studies (OCCWG, 2001). There is good reason, therefore, to believe that the sample in this study was at least as representative of OCD as other published research in the field.

4.4.2 Sample Size

A sample of 32 participants with OCD was used in this study. This was adequate to detect some of the key findings in this study, although undoubtedly a larger sample would have allowed greater statistical power to detect more subtle effects which might have been present. It would therefore be particularly important in future research to verify the results which were found to be insignificant, such as the lack of association between responsibility insight and responsibility. Such confirmatory evidence would reduce the risk that such findings were actually the result of a Type II error.

4.4.3 Response Bias Effects

The possible limitations of response bias have already been discussed in some detail. The extent to which such problems affected the current study is unknown, although

some qualitative observations suggested that they might have been a significant factor in the belief ratings. It seems possible that as a result, the 'others' ratings on responsibility beliefs constituted an inadequate measure of responsibility insight.

4.4.4 Reliability/Validity Issues Uncertain

Conclusive interpretation of the findings of the study is limited by issues of reliability and validity, which are as yet only partially determined. In particular, confidence that the SCORES can reliably measure responsibility insight would be enhanced by evidence of test-retest reliability, and evidence of convergent and divergent validity with an independent measure of the construct. The latter is not easy, as measurement of responsibility insight has not previously been attempted. A more sophisticated attempt to access the construct via responsibility beliefs might be one solution. Furthermore, administration of the SCORES to other clinical groups, particularly those with anxiety disorders, would be helpful in verifying that the components are specifically detecting responsibility reactions, as claimed, and not merely anxiety levels.

4.5 Possible Future Investigation

4.5.1 Overview

Several avenues for valuable future investigation have already been mentioned. Some of these were prompted by the hypotheses concerning the interpretation of the findings, while others stem from methodological limitations that have become evident in retrospect. Suggestions for possible future research are summarised here.

4.5.2 *Study of Beliefs*

As discussed earlier, some changes could be made in the attempt to measure responsibility insight via self-other belief ratings. Two possible improvements to reduce the potential effects of response bias might be the interpolation of non-obsessional beliefs and the reverse coding of some of the items. It is of course possible, as mentioned previously, that this will not prove to be an effective way of detecting responsibility insight, owing to the inherent difficulty in predicting the abstract beliefs of others. One other possible variation might therefore be to prime the respondent, by asking them first to think of someone they know who does not have obsessive-compulsive problems (e.g. a friend), and then to rate how they think that person would respond to the various beliefs (rather than the 'average person in the street'). This priming might allow the individual to better utilise available information and thus reduce guesswork and responses based on non-specific criteria (e.g. the general belief "*I'm different*"). A downside of such an approach would be that the 'other person' selected for priming could not be assumed to be representative of 'the average person', and therefore further unwanted variance in ratings might be introduced. However, such approaches are of potential value, and need to be tested before their utility is finally assessed.

4.5.3 *SCORES*

The SCORES has proved an interesting tool in this study, but further investigation and development would be of considerable value. As already indicated, the psychometric properties of the two components of the scale are at present only partially known, and further validation is essential to interpret and understand the components and their relationships with other key variables in the study. Another

avenue of investigation, as suggested earlier, would be to control for ‘baseline’ effects by means of introducing scenarios without a responsibility theme, and basing measurements on differences in ratings rather than absolute positions on the scale. A further possibility, with a larger sample, would be to separate the subgroup who *underestimated* the responsibility reactions of others, from those who *overestimated* them. These groups could then be analysed independently to examine whether a more complex, bipolar pattern of insight emerges than has been detected in the present study. Finally, as mentioned earlier, valuable information might be obtained by obtaining ratings for ‘ideal self’ in addition to the ‘self’ and ‘other’ ratings.

4.5.4 Further Investigation of Interest

Several other results from this study merit further analysis. Firstly, the finding that responsibility insight was predictive of severity on the YBOCS but not on the MOCI, deserves attention. As hypothesised earlier, this might be explained if responsibility insight acts to lessen severity by increasing a sense of control, but does not actually change or reduce the core behavioural symptoms of the disorder. A future study could test this hypothesis specifically.

Although the main focus of this study was on responsibility insight, it would be of interest to know whether such insight is specific to responsibility, or forms part of a wider cognitive awareness, perhaps akin to ‘psychological mindedness’. This question was not addressed specifically in this study, but would be of value in adequately conceptualising the concept and testing its relationship on OCD severity. Specifically, it would be useful to know whether (1) responsibility insight can be reliably measured as a concept distinct from psychological mindedness, (2) whether

psychological mindedness also predicts severity of OCD, and (3) whether responsibility insight predicts severity of OCD independently of, or merely by virtue of psychological mindedness.

There may be mileage in the further examination of beliefs about responsibility. This study addressed the major question of insight, i.e. the awareness of the idiosyncrasy of one's own responsibility biases. However, as discussed earlier, it was found that responsibility insight was not associated with weaker responsibility beliefs. Whilst this might reflect an inability to alter such beliefs, it raises the alternative possibility that the individual might harbour *positive* beliefs about responsibility, which act to prevent change occurring, despite the existence of insight. This might be expected to occur if the individual considers their high sense of responsibility to be a positive personality characteristic, rather than a primary feature of their disorder. Two competing hypotheses therefore need to be examined, summarised simply as the 'can't change' and the 'don't want to change' hypotheses. The addition of an 'ideal self' rating on the SCORES would be a starting point in addressing this question. Repertory grid methodology might allow a further exploration of possible 'positive' constructs closely allied to responsibility. Such investigations would be valuable both in refining the model and in guiding therapy approaches.

4.6 Conclusions

This study has attempted to explore the role of 'responsibility insight' in obsessive-compulsive disorder. The ideas for the study emerged from the cognitive model emphasising a central role for inflated responsibility, from meta-cognitive ideas suggesting that people are likely to have influential views about their own cognitions,

and from insight research suggesting a spectrum of insight to be found in OCD. The specific concept of responsibility insight, however, had not previously been addressed. Two attempts were made to access this construct, both using the idea of examining 'self' and 'other' ratings. The first method involved the development of a new scale involving scenarios with a theme of responsibility for harm (the SCORES). The second method involved obtaining direct belief ratings, with salient beliefs taken from an existing validated questionnaire, the OBQ. The first method was most successful, and preliminary indications show reasonable psychometric properties, although further validation is necessary. Responsibility insight was shown to be associated with severity of OCD, and this association was found to be largely independent of responsibility levels themselves. The second measure of responsibility insight, the others' ratings of responsibility beliefs, correlated poorly with the SCORES measure, and it is argued that methodological flaws rendered this a weak measure of responsibility insight. Explanations were put forward to account for these results, and several avenues of future research have been suggested, including methodological refinement, further development and validation of the SCORES, and the exploration of new hypotheses, including positive and negative beliefs about responsibility. It is argued that the current study has addressed a potentially important area in cognitive OCD research which may ultimately have significant bearing on both models and treatment of the disorder.

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Appendices

A.1 Diagnostic Criteria for OCD (DSM-IV)

Name

Date

Diagnostic Criteria For Obsessive-Compulsive Disorder

A. Either obsessions or Compulsions:

Obsessions as defined by:

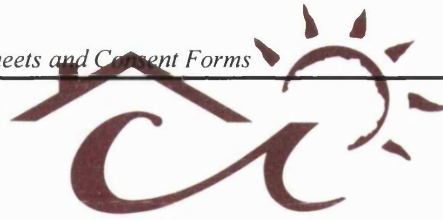
- (1) recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress
- (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
- (3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralise them with some other thought or action
- (4) the person recognises that the obsessional thoughts, impulses, or images are a product of his or her own mind (not imposed from without as in thought insertion)

Compulsions as defined by:

- (1) repetitive behaviours or mental acts that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
- (2) the behaviours or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however these behaviours or mental acts are not connected in a realistic way with what they are designed to neutralise or prevent or are clearly excessive

- B At some point during the course of the disorder, the person has recognised that the obsessions or compulsions are excessive or unreasonable
- C The obsessions or compulsions cause marked distress, are time consuming (take more than 1 hour a day, or significantly interfere with the persons normal routine, occupational functioning, or usual social activities or relationships).
- D The content of the obsessions or compulsions is not restricted to another major psychiatric disorder
- E The disturbance is not due to the direct physiological effects of a substance or a general medical condition

A.2 Information Sheets and Consent Forms



CAMDEN & ISLINGTON
Community Health Services NHS Trust
Your Partner for Health

CONFIDENTIAL

PARTICIPANT INFORMATION SHEET

Title of Study: Beliefs in adults with obsessive compulsive disorders

Date: 25th May 2000

Investigators: Professor Chris Brewin, Richard Stott, Stuart Linke

Contact Details: Sub-Dept of Clinical Health Psychology, UCL, Gower Street, London WC1E 6BT

Telephone: 07881-558820

You are being asked to participate in this study because of the nature of the obsessive/compulsive problems you experience. We are interested in learning about some of the beliefs you may hold, and also about what you make of these beliefs yourself. The purpose of the study is to gain a better understanding of what the beliefs are, and how they influence your difficulties. We hope that this understanding might in the future lead to better treatments for people who find their problems distressing.

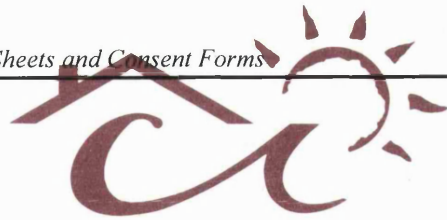
You will be needed for approximately 1-2 hours. There will be two parts to the study. In the first part you will be asked to complete a number of short questionnaires. They will ask about the obsessions and/or compulsions you experience. In addition you will be asked to rate a number of beliefs which some people hold, on how much you believe them.

In the second part you will be interviewed briefly about some of your experiences of the beliefs that you have rated, in a little more depth. This will include how rational you think they are, and what you think other people would make of them. You are free to ask questions about any aspect of the study at any time.

Everything you say and the questionnaires you complete remain confidential and will only be studied by the research investigators named above. With your permission, some of the interview will be taped – this is so the answers you give can be studied in more detail later, but again only by the named investigators and will not be heard by anyone else.

Note: You do not have to take part in this study if you do not want to. If you decide to take part you may withdraw at any time without having to give a reason. Your decision whether to take part or not will not affect your care and management in any way.





CAMDEN & ISLINGTON
Community Health Services NHS Trust
Your Partner for Health

CONFIDENTIAL

CONTROL PARTICIPANT INFORMATION SHEET

Title of Study: Beliefs in adults with obsessive compulsive disorders

Date: 25th May 2000

Investigators: Professor Chris Brewin, Richard Stott, Stuart Linke

Contact Details: Sub-Dept of Clinical Health Psychology, UCL, Gower Street, London WC1E 6BT

Telephone: 07881-558820

You are being asked to participate in this study as a healthy control subject. The purpose of the study is to gain a better understanding into the beliefs of people with obsessive compulsive problems. We hope that this understanding might in the future lead to better treatments for people who find their problems distressing.

You will be needed for approximately one hour. You will be asked to complete a number of short questionnaires relating to certain beliefs that some people hold. Everything you say and the questionnaires you complete remain confidential and will only be studied by the research investigators named above.

Note: You do not have to take part in this study if you do not want to. If you decide to take part you may withdraw at any time without having to give a reason. Your decision whether to take part or not will not affect your care and management in any way.



Centre Number:
Study Number:
Patient Identification Number for this trial:

CONSENT FORM

Title of Project: Beliefs in Adults with Obsessive Compulsive Disorders

Name of Researcher: Richard Stott

Please initial box

1. I confirm that I have read and understand the information sheet dated 25th May 2000 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 agree to take part in the above study.

Name of Patient

Date

Signature

Name of Person taking consent
(if different from researcher)

Date

Signature

Researcher

Date

Signature

Centre Number:
Study Number:
Patient Identification Number for this trial:

CONSENT FORM (HEALTHY VOLUNTEERS)

Title of Project: Beliefs in Adults with Obsessive Compulsive Disorders

Name of Researcher: Richard Stott

Please initial box

1. I confirm that I have read and understand the information sheet dated 25th May 2000 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 legal rights being affected.

3. I agree to take part in the above study.

Name of Volunteer

Date

Signature

Name of Person taking consent
(if different from researcher)

Date

Signature

Researcher

Date

Signature

1 for volunteer; 1 for researcher

A.3 Ethical Approval Letters



The University College London Hospitals

The Joint UCL/UCLH Committees on the Ethics of Human Research

Committee Alpha Chairman: Professor André McLean

Please address all correspondence to:
Iwona Nowicka
Research & Development Directorate
UCLH NHS Trust
1st Floor, Vezey Strong Wing
112 Hampstead Road, London NW1 2LT
Tel. 020 7-380 9579 Fax 020 7-380 9937
e-mail: iwona.nowicka@uclh.org

Professor D Brewin
Professor of Clinical Psychology
Sub-department of Clinical Health Psychology
ULC
Gower Street

11-Oct-00

Dear Professor Brewin

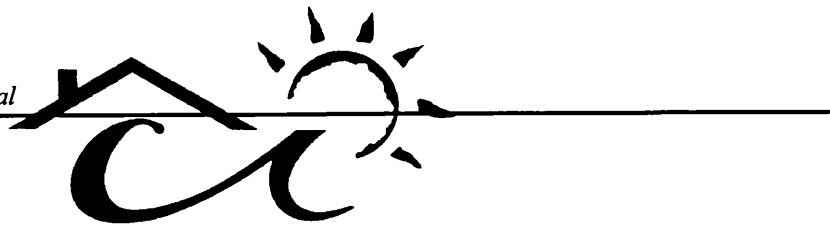
Study No: 00/0212(*Please quote in all correspondence*)
Title: Beliefs in adults with obsessive compulsive disorders (OCD)

Thank you very much for letting us see the above application which has been agreed by Chairman's Action. However, I would be grateful if you let us know whether the risks to the investigator have been considered. In the meantime the study can go ahead.

Please note that it is important that you notify the Committee of any adverse events or changes (name of investigator etc) relating to this project. You should also notify the Committee on completion of the project, or indeed if the project is abandoned. **Please remember to quote the above number in any correspondence.**

Yours sincerely

pp.
Professor André McLean, BM BCh PhD FRC Path
Chairman



CAMDEN & ISLINGTON
Community Health Services NHS Trust

Your Partner for Health

LOCAL RESEARCH ETHICS COMMITTEE

Research Office, 3rd Floor, West Wing, St. Pancras Hospital,
London. NW1 OPE

tel: 020 7530 3376 fax: 020 7530 3235

e-mail: research.office@dial.pipex.com

Chair: *Stephanie Ellis* Administrator: *Michael Peat*

Tuesday, 22 August 2000

Mr Richard Stott
Sub-Department of Clinical Health Psychology
University College London
Gower Street
LONDON WC1E

Dear Mr Stott

Ref: 00/56 (please quote in all further correspondence)

Title: Belief in adults with obsessive compulsive disorders

Thank you for responding to the items raised by the Ethics Committee concerning your application for ethical approval. I am pleased to inform you that they were able to give their approval for it to proceed. Please would you write and inform **Angela Williams** of the start date of your project, at the above address.

Please note that the following conditions of approval apply:

- ♦ It is the responsibility of the investigators to ensure that all associated staff including nursing staff are informed of research projects and are told that they have the approval of the Ethics Committee.
- ♦ If data are to be stored on a computer in such a way as to make it possible to identify individuals then the project must be registered under the Data Protection Act 1998. Please consult your department data protection officer for advice.
- ♦ The Committee must receive immediate notification of any adverse or unforeseen circumstances arising out of the project.
- ♦ The Committee must receive notification: a) when the study is complete; b) if it fails to start or is abandoned; c) if the investigator/s change and d) if any amendments to the study are made.

Page 1

DR. USMAN KHAN: Chairman
ROB LARKMAN: Chief Executive

1/1

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- ♦ The Committee will request details of the progress of the research project periodically (i.e. annually), and require a copy of the report on completion of the project.

Please forward any additional information/amendments regarding your study to contact the Local Research Ethics Committee Administrator or myself at the above address. If you have any queries, please do not hesitate to contact Michael Peat at the Research office.

Yours sincerely



Stephanie Ellis
Committee Chair

Cc. Professor Chris Brewin

A.4 Self Compared to Others Reactions to Events Scale (SCORES)

Self Compared to Others Reactions to Events Scale (SCORES)

Please complete the following information. Then read the instructions opposite before completing the scale.

Name _____

Date of birth _____

Gender **Male / Female**

Marital Status **Single / Married / Divorced / Widowed**

Education History _____

Today's date _____

Instructions

People react to events in different ways. In this scale there are six short imaginary scenarios. Read each scenario and then consider the reactions given (sad, guilty, etc.). On the scales provided, mark an **X** to indicate how you would feel, and mark an **O** to indicate how you think other people would generally feel in the same situation (i.e. the average person on the street). Look at the following example.

Example

Scenario: As you leave the house one day you notice a dead pigeon in the road.

SAD
 not at all a little moderately very extremely
O.....X.....

The X shows that you would be a little sad and the O shows that in general you think other people would be a bit less sad.

Please complete this scale on your own. Remember to rate *all* the reactions in *all* the scenarios. It is important that you **do not** ask anyone else's opinion while you complete this task. If you wish to make any other comments there is a box at the bottom of each page.

Scenario 1. You are walking down a street and a young boy of about 8 walks by. You exchange glances as he passes. Just at that moment he trips over and bruises his knee, and starts to cry.

Now look at the reactions below (sad, guilty, etc.) Mark an X on each scale for how you would feel, and an O for how you think other people would feel (i.e. the average person on the street)

SAD
 not at all a little moderately very extremely

GUILTY
 not at all a little moderately very extremely

ANGRY WITH YOURSELF
 not at all a little moderately very extremely

WORRIED
 not at all a little moderately very extremely

RESPONSIBLE
 not at all a little moderately very extremely

ASHAMED
 not at all a little moderately very extremely

Other Comments

Scenario 2. You are cooking a meal for some friends. One of the ingredients has been in the fridge for over a week but you use it anyway because it smells OK. Shortly after the meal one of your friends has to be sick.

Now look at the reactions below (sad, guilty, etc.) Mark an X on each scale for how you would feel, and an O for how you think other people would feel (i.e. the average person on the street)

SAD
 not at all a little moderately very extremely

GUILTY
 not at all a little moderately very extremely

ANGRY WITH YOURSELF
 not at all a little moderately very extremely

WORRIED
 not at all a little moderately very extremely

RESPONSIBLE
 not at all a little moderately very extremely

ASHAMED
 not at all a little moderately very extremely

Other Comments

Scenario 3. A neighbour asks you to keep an eye on their flat while they are away for a week. While they are away, there is a burglary during the night and some valuable items are stolen. When your neighbour returns she seems very upset.

Now look at the reactions below (sad, guilty, etc.) Mark an X on each scale for how you would feel, and an O for how you think other people would feel (i.e. the average person on the street)

SAD
 not at all a little moderately very extremely

GUILTY
 not at all a little moderately very extremely

ANGRY WITH YOURSELF
 not at all a little moderately very extremely

WORRIED
 not at all a little moderately very extremely

RESPONSIBLE
 not at all a little moderately very extremely

ASHAMED
 not at all a little moderately very extremely

Other Comments

Scenario 4. An old friend was going to drive home after a party. He looked very tired, although he had not been drinking. You ask him if he is OK to drive and he says yes. The next day you hear the news that he had a car accident on the way home which involved another car. He and another man were badly injured.

Now look at the reactions below (sad, guilty, etc.) Mark an X on each scale for how you would feel, and an O for how you think other people would feel (i.e. the average person on the street)

SAD
 not at all a little moderately very extremely

GUILTY
 not at all a little moderately very extremely

ANGRY WITH YOURSELF
 not at all a little moderately very extremely

WORRIED
 not at all a little moderately very extremely

RESPONSIBLE
 not at all a little moderately very extremely

ASHAMED
 not at all a little moderately very extremely

Other Comments

Scenario 5. You get talking to an elderly couple one day while you are out. You have only recently got over a bad cold. A week later you happen to pass the man again, who stops to say that his wife was ill and had to go into hospital for tests.

Now look at the reactions below (sad, guilty, etc.) Mark an X on each scale for how you would feel, and an O for how you think other people would feel (i.e. the average person on the street)

SAD

not at all a little moderately very extremely

GUILTY

not at all a little moderately very extremely

ANGRY WITH YOURSELF

not at all a little moderately very extremely

WORRIED

not at all a little moderately very extremely

RESPONSIBLE

not at all a little moderately very extremely

ASHAMED

not at all a little moderately very extremely

Other Comments

Scenario 6. A friend is driving you home one evening along a busy road and you notice in the distance a dog running in and out of the road, near some parked cars. You don't say anything because you think your friend has also noticed the dog, but your friend doesn't slow down and only notices too late, hitting and injuring the animal.

Now look at the reactions below (sad, guilty, etc.) Mark an X on each scale for how you would feel, and an O for how you think other people would feel (i.e. the average person on the street)

SAD

not at all a little moderately very extremely

GUILTY

not at all a little moderately very extremely

ANGRY WITH YOURSELF

not at all a little moderately very extremely

WORRIED

not at all a little moderately very extremely

RESPONSIBLE

not at all a little moderately very extremely

ASHAMED

not at all a little moderately very extremely

Other Comments