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DOCTOR OF CLINICAL PSYCHOLOGY

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COGNITIVE APPRAISALS IN OBESSIVE-COMPULSIVE DISORDER & OTHER ANXIETY DISORDERS

by

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ABSTRACT

Cognitive Appraisals in OCD and other Anxiety Disorders.
by Jackie MacCallam

This research applied ideas from the cognition-emotion literature to some of the theories in the OCD literature, and in so doing took a multi-dimensional approach to the understanding of OCD. The aim of the study was to explore the nature of 'emotional-cognitive profiles'[1] of people with OCD, and to compare these 'profiles' with those of people with other anxiety disorders and people from a non-clinical population.. Participants from the three groups i.e. an OCD group, an anxiety group and a non-clinical group were asked to rate a number of appraisal dimensions, in response to four vignettes. There were 10 participants in each group (N=30). The vignettes were constructed to evoke feelings of anxiety, guilt, anger and pride. The responses of each group were then compared. The results showed that when anxiety is evoked, both people suffering with OCD and people suffering with other anxiety disorders, perceived more personal responsibility and more harm to self than the non-clinical group. The OCD group also seemed to perceive more personal responsiblity in the situation of guilt, which provoked discussion about the nature and role of guilt and responsibility in the aetiology and maintenance of this disorder. The results also led to some debate about the relationship between anxiety, depression and OCD and finally, a formulation of OCD was proposed. The formulation was an attempt to incorporate thinking from both cognitive and psychodynamic perspectives and to draw together some of the theories and models of OCD, which had been discussed in the study.

[1] Pattern of responses across a number of identified appraisal dimensions

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Author's Declaration

At no time during the registration for the degree of Doctor of Clinical Psychology has the author been registered for any other University award.

The contents of this bound volume are identical to the volume submitted for examination in temporary binding except for the amendments requested at the examination.

This study was conducted while the author was a Trainee Clinical Psychologist in he South West Region, based in United Bristol Healthcare Trust and the research was conducted in collaboration with United Bristol Healthcare Trust and Southmead Healthcare Trust.

Signed.....

Date.....1/8/97.....

Chapter 1: INTRODUCTION

1.1. The Theories.

As the search for an explanation into the relationship between cognition and emotion continues, so have theories of cognitive appraisal continued to develop e.g. Smith & Ellsworth (1985/87), Smith et al (1993). The appraisal theories suggest that cognitions are causal antecedents of emotion and both attributions and appraisals have been associated with this role. However, the most recent literature has identified the latter as having the most significant relationship with emotional experience. For example, Smith et al (1993) found that when attributions were controlled for, appraisals still accounted for a significant amount of the variance related to emotion. The explanation which was given for this was that appraisals act as a mediator between attribution and emotional response. One way to conceptualise this process is to imagine that the attribution acts as a kind of assessment of causation and the appraisal acts as a kind of evaluation of this assessment. Two types of such an evaluation have been identified, in the form of primary and secondary appraisals. According to Lazarus & Smith (1988) the former refers to the perception of whether or not a situation is relevant to ones' well-being and the latter refers to the perception of ones' potential resources to cope with that situation. Smith et al (1993) add to this by defining the former as referring to whether or not the situation is motivationally congruent and relevant and identifying the latter to include accountability/responsibility; coping potentials, both problem focused and emotion focused and future expectancy.

In relation to this there have been a number of studies which have looked at the pattern of appraisals associated with differing emotional experience e.g. Frijda (1987); Manstead & Tetlock (1989); Roseman (1979/1984); Roseman & Spindell (1990); Smith & Kluegel (1982) Smith & Ellsworth (1985/1987); Smith et al (1993) and Weiner & Lerman (1979). Many of these authors have made an attempt to identify specific appraisals/appraisal

dimensions or combinations of appraisals which can be associated with specific emotions. For example, Smith & Ellsworth (1985) discovered six dimensions of appraisals in terms of which emotions were being distinguished. These dimensions were pleasantness, human agency, certainty, attention, anticipated effort, and situational control. Legitimacy was also named as an independent factor but was linked to responsibility and pleasantness. Two examples of how these may distinguish one emotion from another are 1) that anger and guilt are thought to be distinguishable in terms of human agency, the former requiring high other agency and the latter requiring high self agency, 2) that fear and anger are said to differ in terms of certainty, the former requiring appraisals of high uncertainty and the latter appraisals of a greater degree of certainty. Manstead & Tetlock(1989) followed on from this with the addition of the dimension of expectedness and the notion that consistency (with ones' own standards or those of others) is another important factor which may influence appraisals of pleasantness and personal agency. (In the case of the latter it is possible that consistency is measuring something similar to legitimacy, as in the Smith et al study).

At this point it seems pertinent to point out that the complexities of the relationship between attributions, appraisals and emotions could form a thesis in their own right. For example, there is continued debate about whether or not cognition necessarily precedes emotion e.g. Lazarus (1982,1984), whether the two processes are independent e.g. Zajonc (1984) or whether the relationship between these two factors is more of a two-way process e.g. Weiner et al (1979), Teasdale (1983). In itself, this is not the focus of this particular project. However, a significant point from these studies, which is related to the focus of this research, is that without denying the inevitable individual and cultural differences, there is some agreement that a variety of 'typical' appraisals probably does exist in relation to the experience of particular emotions. Some empirical support for this assumption is shown in

a study where 15 emotions were correctly predicted over 40% of the time on the basis of corresponding cognitive appraisals (Smith et al 1993). This may not appear impressive from a statistical point of view. However, it was quoted as being more than six times what one would expect by chance and the clinical relevance may far outweigh the statistical significance. The clinical relevance of cognitive appraisals also brings the content of this introduction more toward the main focus of this study.

In evolutionary terms emotion is often seen as a way of mediating and controlling the self in relation to the environment, or according to Oatley and Johnson-Laird's (1987) theory, "basic emotions have evolved to serve important biological and social functions, and to determine priorities when conflicts arise in ongoing plans and goals" (Mathews and Macleod 1994 p43). For example, fear is often quoted as providing the cue for predicting danger, so inducing the fight or flight responses as ways of promoting safety and survival. In this way emotion also becomes the antecedent to behaviour. This is a very simple example and as we have seen above, emotional responses are generally considered as having more complexity than this example might imply. However, it does bring to mind the question of why people may feel and/or behave differently in very similar situations. In the above example one would ask why some people flee and some fight?

This kind of reasoning and questioning can also be applied to issues of mental health. For example, it is generally acknowledged within the field of psychology that 'symptoms' can be understood as a way of responding to and/or avoiding certain, usually unpleasant, emotions. However, this still leaves the question of why some people develop obsessive compulsive symptoms, some people develop symptoms of extreme anxiety with no obsessive-compulsive symptoms and some develop neither? A psychologist's answer to this last question may differ depending on the theoretical perspective taken. However, if

one takes a cognitive perspective and assumes attributions and appraisals precede emotion and consequent behaviour then one can quickly hypothesise that the answer may well lie in the nature of the appraisals.

Cognitive theorists have recognised that people who are anxious tend to overestimate the likelihood of the occurrence of a negative event e.g. Mineka & Sutton (1992) and are likely to appraise situations as being more threatening than non-anxious people e.g. Clark (1989), Davy et al (1992). A perceived 'sense of low control' has also been associated with anxiety e.g. Barlow (1988), Davey et al (1992), Salzer and Berenbaum (1994), Torestad et al (1990). Davy et al (1992) also suggested that anxiety was associated with appraisals of responsibility for positive , but not negative outcomes. Chambless and Gracey (1989) have also named 'control' as being a significant feature in both OCD and anxiety.

However, it was Carr (1971/1974) who began to look at the nature of cognitive appraisals with reference to obsessive-compulsive disorder and who "first recognised the aetiological significance of unrealistic threat appraisals in obsessive-compulsive neurosis" (McFall & Wollersheim 1979 p64).

A full description of Obsessive Compulsive Disorder(OCD) and a full description of the criteria used to define OCD can be found in de Silva and Rachman (1995) or Thyer (1988), but in brief, OCD is a disorder where the person displays or complains of either obsessions (unwanted, intrusive, recurrent and persistent thoughts, images or impulses, which are experienced as senseless or repugnant), compulsions (repetitive and seemingly purposeful behaviours that are carried out because of a strong feeling of compulsion to do so and are usually performed according to certain rules or in a stereotyped fashion) , or both. The person experiences the obsessions or compulsions to a degree that affects daily functioning

and/or causes distress. An example of an obsession might be a persistent, intrusive image of oneself gouging out the eye of another, and an example of a compulsion might be having to check the door is locked over 100 times before being able to leave the house.

Carr (1971/74) presented a model whereby people with obsessive-compulsive disorder were said to make inaccurate primary appraisals of threat by over-estimating the probability and cost of the occurrence of unfavourable and/or negative events. In support of a threat-related hypothesis, Lavy et al (1994) presented evidence, using a Stroop test, that people with OCD "selectively attend to threatening stimuli associated with their fears", with no attentional bias for positive words which were related to the fears.

Referring back to Carr (1971/74), he suggested that through always making inaccurate appraisals of threat the potential for 'ordinarily unthreatening' events to be perceived as 'threatening' becomes increased. It is in this way that relatively unimportant activities, such as checking the door is locked, can become a matter of life or death for someone who suffers from obsessive-compulsive disorder, in the case of this example, leading to the compulsive behaviour of excessive checking.

In the model described above, OCD is viewed as an anxiety disorder and the compulsive symptoms are seen as a response aimed at lowering the probability of a negative outcome and reducing the anxiety. Rachman (1976) also pointed out that, as well as reducing anxiety, compulsive behaviour might also serve to create a sense of control for the individual. The role of perceived control in the aetiology of OCD has also been raised by others. For example, McFall and Wollersheim (1979) suggest that a loss of control is a factor in the development of OC symptoms and Jahoda(1969) proposed that superstitious beliefs, often characteristic of people suffering from OCD, create the feeling of having some

sense of control. The subjective experience of 'losing control' has also been noted in clinical cases e.g. Walker (1973).

There has been tentative empirical support for both of these positions i.e. that OCD is associated with the need to reduce anxiety and the need to increase control. Firstly, measures of physiological arousal were found to decrease following ritualistic behaviour (Carr 1971) and secondly, clients with OCD showed characteristically low tolerance of uncertainty e.g. Volans (1976) and were more cautious of becoming involved in risk taking behaviour than other "psychiatric" groups (Steiner1972) cited in van Oppen & Arntz (1994)

The theoretical understanding of this time also acknowledged the role of secondary appraisals. For example, Carr (1974) suggested that one way in which secondary appraisals were distorted in people with OCD was through the belief that "compulsive behaviour is effective in dealing with perceived threat". The themes of perfectionism and responsibility were also thought to characterise the beliefs of people with OCD e.g. McFall & Wollersheim (1979). An example of such a thought might be that "making mistakes or failing to live up to one's perfectionistic ideals should result in punishment or condemnation". It was not suggested that the individual is necessarily consciously aware of such beliefs and appraisals, but more that their existence had a consequential effect on emotion and behaviour. On an emotional, rather than cognitive level, it was also suggested that ritualistic behaviour may be more tolerable for the individual than the feelings it was supposed to reduce. At this stage the primary emotion experienced in OCD was considered to be anxiety. However, feelings of guilt were also being associated with this disorder: an area which will be referred to again later.

Since the 1970's, knowledge and understanding of OCD continued to grow, and as it did so it became apparent that the earlier models could not account for some of the more unique features in the presentation of this disorder, nor, indeed, some of the research evidence. For example, why was it that anxiety was seen to increase for some people following ritualisation, why was it that reassurance reduced anxiety for some sufferers and what was the explanation for the observed relationship between OCD and depressed mood? (Salkovskis 1990). It is also true to say that although a number of dysfunctional beliefs were identified as being specific to OCD, many of the appraisals that were supposed to be being made by people in this client group were very similar to those which were supposed to be being made by people with anxiety. So, why were some people, but not others, developing symptoms of OCD? Is it a good enough explanation that the differing underlying beliefs were distorting the appraisals enough to make this difference? This may be so, but even if it is, it still leaves the question as to what specific features of such beliefs and appraisals need to be present in order to make this difference happen.

In an attempt to answer these kinds of questions one is drawn to the work of Beck (1967, 1976, 1979). The idea that people with OCD hold certain, characteristic beliefs can be compared to Beck's theory of cognitive schemas. Beck assumed that individuals prone to certain emotional disorders have more extensive schema where the content of that schema relates to the particular disorder. For example, depressive prone individuals would have more extensive schema relating to loss. It was Salkovskis (1985/89) who first applied this approach more directly to OCD and put forward the idea that "exaggerated" or "inflated" (personal) responsibility was the characteristic feature of the schema relating to this disorder.

Salkovskis(1985/89) proposed a cognitive-behavioural model of OCD, where the characteristic schema become activated and consequent appraisals of exaggerated responsibility are made. The individual is then thought to engage in 'neutralising' behaviour (i.e. obsessive rituals or compulsive behaviour) in order 'put things right'. In this way feelings of responsibility are thought to be reduced, along with the anxiety which is assumed to accompany this process. The role of intrusive thoughts is also prominent in this model. Intrusive thoughts have recently been shown to be part of 'normal' experience, e.g. Rachman & de Silva (1978). However, for people with OCD such thoughts are seen as becoming a trigger and focus for appraisals of inflated responsibility. In short, it is not the occurrence of intrusive thoughts, but rather the appraisal of them which is of interest in understanding the aetiology of OCD.

In summary, Salkovskis argues that primary and secondary appraisals relating to threat are not enough to explain the more unique features of OCD and that the perception or appraisal of inflated responsibility for a negative outcome is needed to precipitate neutralising behaviour. He quotes that "if automatic thoughts arising from the intrusion do not include the possibility of being responsible in some way....then neutralising is very unlikely to take place and the result is likely to be heightened anxiety and depression rather than obsessional symptoms" (Salkovskis 1985 p.579).

Salkovskis's claim, therefore, is that neutralisation is a response to the appraisal of personal responsibility for harm to oneself or another, but that without the appraisal of responsibility neutralising behaviour would not occur. He has provided some evidence for this by showing that subjects who reported neutralising behaviour, as opposed to those who did not, had higher ratings on beliefs of responsibility, but not on attitudes of threat or loss without a component of responsibility (Dent & Salkovskis 1989) Other researchers

have also attempted to clarify the relationship between appraisals of responsibility and appraisals of harm/threat. For example, van Oppen & Arntz (1994) suggested that anxiety is due to the appraisal of future harm, depression is due to the appraisal of responsibility for past negative outcomes and OCD is due to a combination of the both of these i.e. appraisal of high responsibility for future harm or negative outcome. Rheaume et al (1995) also suggested that the threat appraisal model was one which could be applied across the anxiety disorders, but agreed with Salkovskis (1985/89) that perceived responsibility was a feature more specific to OCD. In addition, Rheaume et al (1995) again highlighted the role of perfectionism in OCD. They found that 'perfectionism' was predictive of OC symptoms, albeit to a lesser extent than was found to be true of measures of responsibility.

Overall, there seems to be little doubt that that the link between the threat and responsibility appraisal systems is somehow important to the understanding of OCD. The literature presents some agreement that appraisal of threat is a necessary, but not necessarily a sufficient factor in the development of OCD. However, the question still remains as to whether or not this is also true of inflated responsibility, or if, indeed, it is actually the nature of the combination of these two appraisal systems which is the more significant feature in the understanding of OCD.

Inflated responsibility seems to have been widely observed with both clinical and non-clinical intrusive thoughts e.g. Foa & Steketee (1983), Rachman & Hodgson (1980), Salkovskis & Warwick (1988). As a concept it has also been used to explain some of the anomalies which have been observed in OCD. For example, Rachman & Hodgson (1980) note that when an "obsessional subject is divested wholly or partly of responsibility for the act he or she experiences little discomfort". The explanation for this being that when another takes the responsibility the triggers for perceiving inflated responsibility are

reduced, with the consequent effect of reducing discomfort and 'need to put things right'. Rachman (1993) also suggested that the decrease in symptoms which is often observed when a person with OCD enters a "new" environment is due to the initial lack of perceived responsibility. The symptoms are only thought to reappear once a sense of responsibility is achieved. Appraisals of responsibility can also be used to provide an explanation for why depression can sometimes cause an increase in OC symptoms and sometimes a decrease. It is thought to depend on whether or not the person is suffering from the "hopelessness" subtype depression i.e. in the case of "hopelessness" type depression, one would hold strong beliefs that one could have no influence over outcome and therefore the likelihood of perceiving inflated personal responsibility is greatly diminished.

Overall, there seems to be a degree of clinical acknowledgement that inflated responsibility is probably important in the understanding of OCD. There has also been some empirical support for the role of responsibility in OCD. Freeston et al (1992) studied the structural dimensions of intrusive thought experience and found five factors relating to cognitive intrusions. The third of these was identified as evaluation and included measures of responsibility, disapproval and guilt. This factor was associated with depression, but was also identified as being the only significant predictor of self reported measures of compulsive behaviour. In agreement with these findings Bouvard et al (1989) (cited in Clark & Purdon 1993) had previously found responsibility to be a salient dimension in the structure of obsessive thoughts. Additionally, Freeston et al (1992) found that people with OCD reported that they would feel more responsible if the content of intrusive thoughts were to happen , than matched medical outpatients and control participants.

In a study by Rheaume et al (1994) responsibility was moderately correlated to OC symptoms, thought suppression , irrational belief and obsessional thoughts, with no such

correlation with anxiety and depression. Additionally, in studies where there has been an experimental manipulation of a decrease in responsibility or of beliefs about responsibility there has been a corresponding change in the compulsive urge to check e.g. Lopatka & Rachman (1995), Lacoudeur (1995).

At this point it is worth noting some of the difficulties that some of the research evidence quoted above has to face and some of the anomalous results which need further explanation. For example, many of the conclusions are based on correlational comparisons and self-report measures and many of the correlations and/or predictive relationships are only cited as moderate. Clark & Purdon (1995) have also questioned the validity and reliability of some of the measures used and much of the research focuses heavily on non-clinical, rather than clinical populations. (Dependent on whether or not OCD is viewed on a continuum of 'normal' experience the latter may or may not prove to be a significant difficulty).

There are also several examples of anomalous results. In the studies where there was a manipulation of responsibility the compulsive behaviour i.e. checking, did not decrease when the manipulation of responsibility was weak (it only decreased when manipulation effects were high and influenced 'pivotal power'). An increase in symptoms following experimental manipulation of level of responsibility was not always significant and where two groups differed on level of manipulated perceived responsibility, then perceived anxiety was also noted as a significant distinguishing factor between these groups.

If Salkovskis's formulation is correct one would also expect 'inflated responsibility' to be a general, rather than a specific feature of thinking in people who have OCD i.e. the 'inflated responsibility' schema may only be triggered by certain stimuli, but one might expect an individual to be responsibility-prone if they held such beliefs. However, there has already

been some suggestion that the interaction between responsibility and OCD is more situation specific and idiosyncratic than this theoretical explanation would allow e.g. Rachman et al (1995). Rachman cites a number of arguments for the latter position. For example, inflated responsibility can be observed in the absence of OCD, some OCD clients welcome responsibility in some areas of their lives and psychometric studies have not been successful in identifying a unitary factor of responsibility .

Given the above, one begins to question whether or not inflated responsibility can provide the answers to the questions surrounding OCD. The perspective that inflated responsibility may not hold all the answers is also supported by studies which have found only minimal or no correlations between measures of perceived responsibility and OCD symptoms e.g. Steketee & Frost (1993), Frost, Steketee et al (1994), Freeston et al (1991). Rheaume et al (1995) also cite two further studies which failed to identify responsibility schema associated with OCD in both clinical and non-clinical populations. (Letarte et al 1992; Rheaume, Lemarche et al 1992).

These differences in the findings may well be explainable in terms of measures and methodologies. For example, the latter experiments used the Stroop test, where confounding variables such as the emotionality of the words make it difficult to interpret results. It is also unclear how reliable Stroop test data are in identifying schemata in clinical populations. Also, in relation to the first two studies, the measure of responsibility which was used was taken from the Jackson Personality Inventory and it is thought that this measure does not necessarily correspond to responsibility in OCD.

However, whatever the explanation, one is still left with interesting, but slightly equivocal findings which continue to beg the questions as to what is the exact nature and role of

responsibility and what is the complete answer in terms of understanding the aetiology of OCD?

Some of the suggested answers to these questions have included the need to look at specific aspects of responsibility, such as "pivotal power[1]", described by Rheaume et al (1995), thought-action fusion, e.g. Rachman et al (1995), moral responsibility e.g. Rheaume et al (1995) or a lack of "omission bias[2]", a phrase coined by Spranca et al (1991). The latter concept comes from the observation that people with OCD seem as concerned for what they do not do as for what they do and a hint that, clinically, people with OCD feel less responsible for causing deliberate harm than for causing an event by accident e.g. Salkovskis et al (1995).

However, the factors of perfectionism and control must also not be forgotten. For example, Purdon & Clark(1995) found that intrusions which lead to neutralising had higher guilt and disapproval ratings, but were not necessarily higher on ratings of responsibility. Freeston et al (1991) found that participants who reported greater disapproval of intrusive thoughts displayed more anxious, depressed and obsessional symptoms. (In these instances disapproval is being construed as an evaluation of not living up to expected standards, so making the link with beliefs relating to perfectionism. Turner et al (1992) also suggested that uncontrollability and unacceptability may be central to the distinction of 'normal' experience of intrusive thoughts as opposed to the obsessive-compulsive experience and finally, O'Kearney (1993) presented a case study where cognitions related to control, rather than appraisals of responsibility, were instrumental in initiating neutralisation.

From the evidence so far it seems unlikely that one avenue of investigation will lead to the

[1] Belief that one is centrally responsible for provoking or preventing subjectively crucial negative outcomes
[2] Belief that one is not as responsible for something one omitted to do, as for something one did do

answer. In fact, it seems intuitive to conclude that one needs to consider a wide range of factors and the relationships and interactions between these factors in any comprehensive formulation of OCD. In cognitive terms this would suggest that one needs to consider a wide variety of schema and appraisals and their relationship with one another. With this in mind the literature so far reviewed seems to highlight appraisals of threat e.g. Carr (1971), appraisals of control e.g. O'Kearney (1993), beliefs about perfectionism e.g. Rheaume et al (1995) and appraisals of responsibility e.g. Salkovskis (1985).

Rheaume et al (1995) have already begun to make a theoretical link between responsibility and control, by suggesting that "pivotal influence" relates to the belief that one has control over outcome. They go on to suggest that looking at the combination of responsibility and control schemas is the next step in increasing our understanding of OCD. Clark & Purdon (1995) reiterate this last point by proposing the hypothesis that it is the combination of the "need to control thoughts" and the "perception of responsibility" which leads to OCD. Furthermore, Freeston et al (1995) found that a decrease in symptoms of OCD was accompanied by changes in cognitive variables including appraisals of danger, appraisals of responsibility and irrational beliefs about obsessions, so, again, adding "threat appraisals" to the concept of a multi-appraisal formulation of OCD. As will be seen later, this research attempts to encompass this multi-faceted view.

From a psychodynamic, rather than a cognitive point of view, some others e.g. O'Kearney (1993) have emphasised the need to look at the individual meaning of OC behaviour and raised the hypothesis that OC symptoms may be a way of embodying emotions. Indeed, it might well be the case that the meaning of OCD for a given individual could be better understood if one were to consider emotionality a little more closely. According to Salkovskis, it is the nature of the cognitive appraisal which gives the intrusive thoughts

emotional significance. However, the role of emotional significance has also been the focus of attention in its own right.

To begin an exploration of this area one can turn to Rosen (1975) who suggested that where unacceptable impulses/thoughts lead to guilt, the development of OC symptoms can be seen as a form of self-punishment: Rosen speculates that learned guilt acts as a drive which motivates the compulsive behaviour. The compulsive behaviour is seen as a self-inflicted punishment, which in turn produces drive reduction and so relieves the feelings of guilt. This model is similar to the anxiety model, also described in Rosen (1975) , except in this case the learned drive is obviously anxiety and the compulsive behaviour serves to reduce this anxiety. The guilt model is assumed only to be applicable if the perceived guilt is greater than perceived anxiety. This formulation would seem to put OCD in the realms of being a "guilt disorder" as well as, or as opposed to being an anxiety disorder. These models also raise the question of whether the combination and/or the relative balance between the emotions of guilt and anxiety can provide some explanation for the aetiological differences between anxiety disorders and OCD.

Rosen is not the only one to have associated guilt with OCD. It was originally referred to by Freud (1896) and again was referred to in the theories of the 1970's. Rachman & Hodgson (1980) have suggested a similar link between OCD and guilt in that the indecisiveness and doubting observed in this disorder may be due to attempts to avoid feelings of guilt and Salkovskis (1989) notes that thoughts associated with responsibility schema are those of guilt, punishment and blame. Thyer (1988) also makes the comment that guilt and remorse are major components of the clinical presentation of OCD. These kinds of observations and suggestions raise a number of questions. For example, is guilt a causal agent in this disorder,

is it an epiphenomenon or are excessive feelings of guilt a consistent and primary feature of this disorder?

Common sense tells us that it is not a surprising conceptual leap from responsibility to guilt, or vice versa. The relevance to OCD also becomes even more apparent when one considers the explanations of guilt, as stated by Tallis (1995) i.e. guilt is likely to be experienced if one violates an "inner rule" or as stated by Wicker et al (1983) i.e. that "guilt is said to follow from acts that violate ethical norms, principles of justice...or moral values. Guilt is accompanied by feelings of personal responsibility. One can imagine that 'inner rules' or "principles of justice" are probably more likely to be violated if they are based on beliefs which aspire to perfectionism, as is suggested to be the case for people with OCD. Rachman (1971) also informs this assumption with the suggestion that "the aetiology of obsessional thoughts and impulses is likely for those who have a strict moral background and "high standards of conduct and morality; hence they regard a large percentage of their thoughts, impulses and images as unacceptable" (Rachman & Hodgson 1980 p.267).

There is a limited amount of research literature relating to this area, but what is available tends to be supportive of the idea that guilt is a significant factor in OCD. A significant amount of the information about guilt comes from observational material or case studies and, not surprisingly, is often linked to responsibility. For example, Tallis (1994) and McGraw (1989) cite case examples where symptoms of OCD were triggered by situations which provoked intense feelings of guilt and responsibility. Niler and Beck (1989) noted that sufferers of OCD often experience strong feelings of guilt over the content of their obsessions, Rachman (1993) commented that people with OCD are more easily apt to feel guilt for the actions of others as well as those of themselves and Dollard and Miller (1950) suggested that fear and guilt "usually become obvious if the patient is forced to stop

performing the compulsive response." Perhaps it should be noted here that even at this early stage i.e. 1950's, feelings relating to both anxiety and responsibility were being associated with this disorder.

There are also a variety of empirical studies which indicate guilt as being a specific feature of OCD. For example, Niler and Beck (1989) reported guilt as a better predictor of the frequency, tenacity and distress associated with intrusions than depression or anxiety, Steketee et al (1987) found feelings of guilt to be more prominent in people with OCD than in people with other anxiety disorders and Frost et al (1994) found that people scoring above a certain cut-off point on measures of OCD symptomology experienced more guilt than those scoring below this point.

Further to this, Steketee (1991) undertook a study which examined the relationship between religiosity, guilt and OCD. In this instance, people with OCD were not found to be more religious than people with anxiety disorders, but there was a correlation between high guilt ratings and the severity of OCD symptoms; a correlation which was not apparent in the other anxiety disorder groups. Also, in Salkovskis's theory OC symptoms are linked to the appraisal of an intrusive thought and Purdon and Clark (1994) found that high obsessionals rated their most upsetting intrusive thoughts as happening more frequently, being more unpleasant, more guilt-inducing and more difficult to control than low obsessionals. The theme of control again being present, as well as guilt, in these evaluations.

Some of the research evidence related to guilt comes from the studies which were cited earlier, e.g. in the study by Freeston et al (1992), the evaluation factor, which was predictive of compulsive experience, consisted of guilt, as well as responsibility and disapproval.

As is the case with the research into responsibility one needs to be cautious about drawing conclusions about clinical populations from information gathered from non-clinical groups and about making generalisations from observational and correlational data . It can also be difficult to fully separate out feelings of guilt as opposed to feelings of responsibility. Additionally, there is some evidence which questions the specific link between guilt and OCD. For example, one study did not show an association between guilt and negative intrusive thoughts (Salkovskis and Reynolds 1991). Machanda et al (1979) also found that they could not distinguish people with depression from people with OCD on the basis of a guilt scale. The latter study raises the question as to whether guilt is associated with the depressive symptoms so often associated with OCD, rather than the OCD itself.

In summary, it seems that in spite of some of the limitations, there remains a very strong suggestion that guilt has a part to play in the development of OCD, probably linked to the notions of responsibility. Indeed, some might say that the focus on guilt has, to some extent, replaced the focus on anxiety in this field. Needless to say the waters do not stay still at this point, but become yet further muddied, in that some suggest that neither anxiety nor guilt are the best descriptors of the emotional state experienced by people with OCD! For example, Reed (1985) argues that anger is a more accurate description.

At first this may seem counter intuitive to the other areas of investigation. However, feelings of anger can be easily linked to feelings guilt. For example, "Beck (1976) argues that anger is the result of a perceived transgression of one's rules by another, whilst guilt is the transgression of those rules by oneself" (Reynolds and Salkovsksis 1991). In psychodynamic arenas, guilt is also often acknowledged as an internalisation of anger which a person has been unable to express externally. In addition 'anger turned inwards' is the classic Freudian basis for depression, where the individual is again feels unable to direct the

anger outwardly (Abramson and Freud 1911, 1917). Rachman (1993) points out that people with OCD often find difficulty in expressing anger externally. In itself this would fit with the notion that people in this client group feel more guilty, i.e. that which cannot be expressed toward others as anger is being expressed towards oneself in the form of guilt.

In terms of research literature there seems to be much less available here than in the other areas which have been discussed. Also, what little there is, is usually in the form of observational data or case study material. For example, Rachman (1993) made the observation that, for some clients, learning to express anger results in a decrease in symptoms. One could argue that this effect is the equivalent to a reduction of guilt i.e. by being enabled to express anger externally, there becomes less need to internalise this feeling as guilt. Nevertheless, this kind of observation does put anger into the arena for further investigation. Ryz (1992) also uses a case example to illustrate how OCD might be used as a defence against anger; in this case in a boy who felt it was not allowable to voice being angry.

As in the other areas of research, the fact that the evidence for the role of anger in OCD is mainly represented through case studies does not necessarily make the evidence less valid. However, this fact does affect the generalisations and conclusions one might otherwise be in a better position to make.

As an overall summary to reviewing the literature in this area it seems fitting to repeat the statement made earlier that no formulation of OCD will be complete unless it encompasses a wide range of influential factors, including both cognitive and emotional perspectives. In addition, it seems that a logical next step is to explore the relationships between some or all of these factors. One example which illustrates an attempt to explain some of the links

between cognitive and emotional experience, is seen in an article by Tallis (1992). Tallis describes two case examples where children had specific learning experiences which could easily have led to increased feelings of both guilt and responsibility and beliefs about thought-action fusion. In both examples, the child had experienced thoughts about wanting a certain person to die or disappear, which within a week became reality when that person actually died

Another alternative perspective on the understanding of OCD might come closer to the suggestion made by Rosen (1975) i.e. that different formulations and treatments may be needed for individual people and/or people who are experiencing different types of OC symptoms. An example of this can be drawn from the literature relating to inflated responsibility, as it has more recently been suggested that this feature may play a more significant role in symptoms of 'checking behaviour', as opposed to other symptoms e.g. excessive washing (Lopatka & Rachman 1995). Rachman and Hodgson (1980) have also suggested that 'cleaners' and 'checkers' sometimes "responded differentially".

It is from this review of the literature and the variety of questions and debates that have been raised, that the following research was conceptualised and proposed i.e.

a) an attempt was made to further examine whether or not appraisals of responsibility, along with several other cognitive appraisals, made by people suffering from OCD are different from appraisals made by people who are not suffering with this disorder.

b) an attempt was made to link emotionality into the process in a more controlled way than has previously been explored. In this way the cognition-emotion relationship was considered more as a two way process.

c) an attempt was made to offer some indication as to whether or not inflated responsibility, or, indeed any of the other appraisal dimensions which are included, might be considered as a general, rather than a specific feature of OCD.

d) an attempt was made to investigate OCD as a 'multi-appraisal disorder', by developing research which considered several appraisal dimensions, as opposed to concentrating on only one. In this case appraisals of responsibility, control, threat (in the form of harm versus benefit) and consistency with standards (in the form of unacceptability) were considered.

To begin to explain the thinking behind this research approach one first needs to go back to the beginning of the introduction, where the relationship between cognition and emotion was briefly discussed. The study undertaken by Manstead and Tetlock (1989) identified a number of appraisal dimensions which were found to be useful in the differentiation of a variety of emotions e.g. anger and guilt. On examination of these dimensions it is not difficult to make a connection with features of OCD: The four dimensions which these authors made explicit were 1) Pleasure, ranging from pleasant to unpleasant; 2) Personal agency (in other words responsibility), ranging from high to low personal responsibility; 3) Level of unexpectedness, ranging from expected to unexpected and 4) Level of situational control, ranging from high to low levels of control. Another appraisal was also drawn out in this study i.e. consistency versus inconsistency with one's own standards and those of others. Although the latter was not found to be a dimension in its own right it influenced the first two factors of pleasantness and responsibility.

Taking the dimensions from above one finds that control, responsibility, consistency with standards (in the form of perfectionism) and pleasure, or rather distress, (in the form of emotional disturbance) all seem to fit neatly into the profile of OCD. If, as the cognition-emotion literature suggests there are certain 'typical' patterns of cognitive appraisal relating

to certain 'typical' emotions then one begins to ask the question as to whether or not there might be different features in these cognitive patterns for some one experiencing symptoms of OCD.

Secondly, if one now refers back to the literature relating to the different areas of research into OCD it would seem to make sense to investigate the nature of cognitive patterns in situations of guilt, anxiety and anger, using appraisals of harm/threat; control; agency/responsibility and perfectionism. In order to ascertain whether or not certain appraisals are significantly different from the 'norm' when people are suffering from OCD a comparison needs to be made. The most obvious comparison is with people from the so-called 'normal' population, a comparison which was adopted by this study. Another comparison group was also chosen for this study, in the form of an anxiety group. Although it has been disputed by some, OCD has been , and is still, usually identified as an anxiety disorder (DSM IV). Consequently, it was considered relevant and important to make a comparison with the appraisals made by people who suffer from high levels of anxiety, without experiencing symptoms of OCD. It was hoped that the latter comparison would facilitate consideration, or not, of specific differences in appraisals between two clinical populations, in addition to the consideration of the differences between clinical and non-clinical populations.

Thirdly, a number of hypotheses become apparent if one reflects on the literature as a whole. For example, if one supports the current cognitive-behavioural model e.g. Salkovskis (1985/89), the hypothesis that people with OCD are likely to be appraising and experiencing emotional situations more highly in terms of personal responsibility, than people who are not suffering from this disorder, becomes obvious. If, however, "inflated responsibility" is supported as being specific to certain situations and

is not a general feature of OCD thinking e.g. Rachman et al (1995) then one might not expect such an hypothesis to be met.

Therefore, with the above points in mind, this study was set up to investigate whether or not there were differences in the specific cognitive appraisals and/or cognitive appraisal patterns/profiles of people with OCD when compared to people with anxiety or people who were not suffering from either of these disorders. Guided by the literature, the study was also set up to focus only on the appraisals made in certain emotional situations i.e. guilt, anger and anxiety. In addition, an emotional situation involving pride was included as well. The reasons for including a positive emotional situation will be discussed more fully in the chapter on 'Methods', but two supporting themes from the literature are one, that Rachman (1993) reported that people with OCD take less responsibility for positive events and two, that Reynolds and Salkovskis(1991) found the feelings of guilt to be negatively correlated with pleasant intrusive thoughts. These four emotions had also been included in one or several of the studies which looked at the relationship between cognition and emotion. The conclusion from such studies was that it is probably possible to distinguish these emotions in terms of their associated cognitive appraisal dimensions. Such conclusions meant that it was considered justifiable to consider each emotional situation separately in this study, with the focus being on the group comparisons in each case.

1.2. Research Questions:

The resulting research questions were then specified as follows :

1) In situations of anxiety, guilt and anger does the pattern of cognitive appraisals differ between people suffering from OCD, people suffering from anxiety or people from a non-clinical population?

2) Is the appraisal of personal responsibility a factor which can be used to distinguish people suffering from OCD from people suffering with anxiety or people from a non-clinical population?

3) Are there any other specific appraisals, relating to any particular emotional experience which can be seen to differentiate people suffering from OCD from people suffering with anxiety or people from a non-clinical population?

1.3. Research aims

The aims of the study were:

1) To measure the nature of a number of cognitive appraisals in situations of anxiety, guilt, anger and pride for people suffering from OCD, people suffering from anxiety and people from a non-clinical population.

2) To compare measures of these cognitive appraisals in situations of anxiety, guilt, anger and pride between people suffering from OCD, people suffering from anxiety and people from a non-clinical population.

3) To explore whether or not the appraisal of personal responsibility is a factor which can be used to differentiate people suffering from OCD from people suffering from anxiety or people from a non-clinical population.

Overall, using a term adopted by the researcher, this research was developed to compare 'emotional-cognitive profiles'[3] and certain, specified appraisal dimensions between people with OCD, people with anxiety, but without symptoms of OCD and people from a non-clinical/ 'normal' population.

[3] Pattern of responses across a number of identified appraisal dimensions

1.4. The Hypotheses.

HYPOTHESIS ONE:

1a) In response to the anxiety vignette, the three groups will show different profiles across the fourteen appraisal dimensions, as shown by a significant interaction between group and appraisal dimension scores.

1b) In response to the guilt vignette, the three groups will show different profiles across the fourteen appraisal dimensions, as shown by a significant interaction between group and appraisal dimension scores.

1c) In response to the anger vignette, the three groups will show different profiles across the fourteen appraisal dimensions, as shown by a significant interaction between group and appraisal dimension scores.

1d) In response to the pride vignette, the three groups will not show different profiles across the fourteen appraisal dimensions, as shown by a non-significant interaction between group and appraisal dimension scores.

If these hypotheses were met it would support the overall theoretical position that "how individuals process emotional information may be a causal factor *(or at least an important factor)* in the development or maintenance of emotional disorder"(Mathews and Macleod 1994 p.27).

The next five hypotheses make predictions about how such appraisals may differ between people with OCD, people with anxiety but no diagnosis of OCD and people in a non-clinical population.

Using the Appraisal Questionnaire, each appraisal score was measured on an analogue scale. The Appraisal Questionnaire (see section entitled "Measures" for further details) measured 16 dependent variables in this way, as listed below:

Perceived pleasure; perceived personal responsibility, perceived level of responsibility attributable to other people, perceived personal control, perceived control of other people, perceived level of situational control (in other words 'chance'), acceptability of one's own actions by self, acceptability of one's own actions by other people, acceptability of one's own feelings by self, acceptability of one's own feelings by other people, perceived harm to self, perceived benefit to self, perceived harm to others, perceived benefit to others, likelihood of experiencing current symptoms in the given situation and likelihood of experiencing current symptoms in another similar situation.

NB. From this point in the text the phrase 'in the situation of' will be used to refer to the four vignettes i.e. those of anxiety , guilt, anger and pride.

HYPOTHESIS TWO:

2) In the situations of anxiety and guilt the OCD group will perceive more personal responsibility than the anxiety and non-clinical groups i.e. the OCD group will show lower scores on this appraisal dimension than the other two groups.

2a) In the situations of anger and pride there will be no differences between the groups on measures of this appraisal.

If hypothesis two is met it would provide support for Salkovskis's cognitive-behavioural model, where appraisals of high personal responsibility are thought to be a specific feature of OCD. It would also support the importance of both anxiety and guilt as emotional features of this disorder and highlight the link between the appraisal of personal responsibility and these emotional experiences. In addition, if part 2a, as well as part 2, of

the hypothesis is accepted then it would also provide support for appraisals of responsibility being emotion and/or situation-specific, rather than being a general feature of OCD thinking. If not met, the results may be used to suggest the reverse.

The formulation of the next hypothesis makes the assumption that for people with OCD, the need to "create a sense of control" e.g. Rachman (1976) is triggered by the person perceiving a low degree of control in a situation, as is suggested for people with anxiety e.g. Chambless and Gracey (1989) Salzer and Berenbaum (1994).

HYPOTHESIS THREE:

3) In the situations of anxiety the OCD and anxiety groups will perceive less personal control than the non-clinical group i.e. the two clinical groups will show higher scores on this appraisal dimension than the non-clinical group.

3a) In the situation of guilt the OCD group will perceive less personal control than the anxiety and non-clinical groups i.e. the OCD group will show higher scores on this appraisal dimension than the other two groups.

3b) In the situations of anger and pride there will be no differences between the groups on measures of this appraisal.

If Hypothesis three is met it would provide support for the theoretical position that the perception of control is an important feature in the aetiology of anxiety disorders, including OCD. i.e. if appraisals of control were found to be different in situations of anxiety, for both clinical groups, this would confirm the link of these appraisals with this particular emotional experience, a feature common to both 'anxiety' and OCD. In addition if appraisals of perceived control made by the OCD group were found to differ from those made by the other two groups, in situations of guilt (an emotional experience which has been specifically

linked with OCD) then this would have theoretical implications as to how such appraisals influence or are linked to this emotional experience for this client group. Part 3b of the hypothesis again promotes exploration of whether or not the appraisal of control is emotion and/or situation specific, rather than being a general feature of thinking in OCD and /or anxiety disorder.

HYPOTHESIS FOUR:

4) In the situations of anger and guilt the OCD group will find the feelings of anger and guilt less acceptable than the anxiety and non-clinical groups i.e. the OCD group will show higher scores on this appraisal dimension than the other two groups.

The results pertaining to this hypothesis will allow debate relating to the theoretical position that anger and guilt are emotional experiences which people with OCD generally find difficult to accept and deal with. If this hypothesis is found to be true then it may also provide some support for the notion that these emotional experiences may have a particular significance in the development and maintenance of OCD.

HYPOTHESIS FIVE:

5) In the situation of guilt the OCD group will perceive their actions to be less acceptable than the anxiety and non-clinical groups. i.e. the OCD group will show higher scores on this appraisal dimension than the other two groups.

If this hypothesis is met it provides some support for a theoretical link between the experience of guilt and the beliefs about the standards/acceptability of one's own behaviour. In other words it would allow discussion about the links between the theoretical position of

people with OCD having particular standards (thought to be high moral standards), and the theoretical position of the experience of guilt being associated with OCD

HYPOTHESIS SIX:

6) In the situation of anxiety the OCD and anxiety groups will perceive more 'harm to self' than the non-clinical group i.e. the two clinical groups will show lower scores on this appraisal dimension than the non-clinical group.

6a) In the situation of guilt the OCD group will perceive more 'harm to self' than the anxiety and non-clinical groups i.e. the OCD group will have lower scores on this appraisal dimension than the other two groups.

6b) In the situations of anger and pride there will be no differences between the groups on measures of this appraisal.

Firstly, if hypothesis 6 is met it would provide support for the "threat appraisal" hypothesis, which has been linked to both anxiety e.g. Clark (1989) and OCD e.g. Carr (1971/74). If hypothesis 6 is met it would also support the idea that the increased perception of threat is a feature of anxiety in general rather than being a specific feature in the aetiology of OCD. Secondly , if part 6a is supported, this would provide further support for the role of threat appraisal in OCD e.g. Carr (1971/74), but would also provide support for the link between appraisals of threat and guilt being a feature specific to OCD. In addition, guilt has obvious links with responsibility and so support for this part of the hypothesis could also be interpreted as providing support for Salkovskis's (1989) model of OCD. Finally, if part 6b was met it would support the theoretical position that an over estimation of threat is specifically associated to anxiety, and guilt, rather than to any other emotional distress.

The last hypothesis makes a prediction about which appraisals will be correlated with the perceived likelihood of the occurrence of symptoms i.e. symptoms of anxiety and/or OCD. The perceived likelihood of the occurrence of symptoms was also measured in the Appraisal Questionnaire using an analogue scale.

HYPOTHESIS SEVEN:

7) Appraisals of high levels of harm to self *and* appraisals of high levels of personal responsibility will both be significantly correlated with the perceived likelihood of the occurrence of symptoms of OCD, whereas only appraisals of high levels of harm to self will be significantly correlated with the perceived likelihood of the occurrence of symptoms of anxiety.

If hypothesis 7 is met it would again provide support for Salkovskis's model (1985/1989), in that not only appraisals of threat, but also appraisals of high levels of perceived responsibility, are associated with the development of OC symptoms. In other words, it would support the position that one needs to consider appraisals both of responsibility and threat if one is to understand the aetiology of OCD, rather than the aetiology of anxiety per se.

Chapter 2: METHODS

2.1. Design

This study consists of four quasi-experimental designs, one for each of the four emotional situations i.e. anxiety, anger, pride and guilt. Each design involves one independent variable (group), 14 dependent variables relating to the appraisal dimensions and 2 dependent variables relating to the likelihood of symptom occurrence. For the purposes of the first four analyses the 14 appraisal dimensions were considered as within-subject factors.

2.2. Participants

Participants for the two clinical comparison groups were recruited from the mental health psychology departments of two local NHS Trusts and from a local TOP self help group. The self help group included people suffering with phobic anxiety and people suffering from OCD.

The mental health psychologists were asked to identify clients from their caseload, who were suffering from a) OCD or b) phobic anxiety, where anxiety symptoms were the main presenting problem and where there was no 'label' of OCD. In both cases the psychologists were asked not to include anyone who was currently experiencing 'psychotic' symptoms.

The criteria for inclusion and exclusion in/from the OCD and anxiety groups were not made any more specific than this, based on the assumption that psychologists would be familiar with these diagnostic terms. It was also assumed that if the clients were carrying the 'labels', then a more formal diagnosis had probably been made previously. The scores on the Padua Inventory (PI) and the Beck Anxiety Inventory (BAI) also meant that there was the possibility of a retrospective check of level of symptoms in both these groups.

With regard to the anxiety group, the inclusion criteria were not restricted to any particular type of phobic anxiety, other than to exclude people who had a primary and significant fear of public speaking. The latter exclusion criterion was primarily employed to avoid biasing the chosen anxiety vignette, which described a scenario involving public speaking. However, it was also used to avoid placing these clients in a situation which might evoke very high levels of anxiety unnecessarily.(It was acknowledged that a fear of public speaking was likely to be present for many people who were anxious; it was only where it was considered to be a primary and significantly heightened difficulty that the psychologist was asked not to approach that person).

The psychologists then approached appropriately identified clients to determine whether or not they might be willing to take part in this research project. This process involved giving the client the Information Sheet pertaining to the research (see Item 8 in the Appendix). The client was not required to give a decision immediately, but was able to take the Information Sheet away for perusal. At this point, clients were informed that they could communicate their willingness to participate by either a) informing the relevant psychologist, who would then inform the researcher b) leaving a message on the contact number or c) leaving a contact number/address for the researcher to contact them directly. Clients were also made aware that if they did not make contact or leave a telephone number/address it would be assumed that they had made the decision not to participate and no further contact would be initiated.

Participants who were recruited from the self help group, were treated in the same way, except that they had direct contact with the researcher from the outset, rather than first being approached via another psychologist.

The participants for the non-clinical group were recruited by approaching staff groups or individuals from a variety of staff groups e.g. nursing staff, administration staff and accountancy staff. In this case the research was explained, with the additional explanation that they were being asked if they would be willing to participate in the non-clinical group i.e. people who were not suffering from OCD or anxiety. Unless someone stated that they did not want to take one, the Information Sheets were given out to interested individuals. The researcher was available to answer any questions and/or concerns and then people were given time to consider whether or not they would be willing to participate. As with the other two groups it was always emphasised that participation in this research was completely voluntary, with no obligation to participate. A meeting with the researcher was only arranged if an individual affirmed his/her willingness to participate.

For the purposes of this study, the three groups needed to be differentiated by scores on the Beck Depression Inventory (a measure of depression), the Beck Anxiety Inventory (a measure of anxiety) and the Padua Inventory (a measure of obsessive compulsive symptoms). In the event the following criteria were used for inclusion in each group; (see the next section, entitled 'Measures' for further details) :

OCD Group:	Inclusion criteria:	Padua score > 65
		BDI score no limits
		BAI score no limits
Anxiety Group:	Inclusion criteria:	Padua score < 65
		BDI score no limits
		BAI score > 16
Non-clinical group:	Inclusion criteria:	Padua score < 50
		BDI score < 15
		BAI score < 15

The only exclusion criterion, applied across the three groups, was the presence of 'psychotic' symptoms.

At the outset the aim was to include between ten and twenty participants in each group. In the event the results from thirty people, ten in each group, were included in the main analysis. Thirty eight people were interviewed in all, but four participants were excluded from the OCD group due to scores below 65 on the Padua, one person was excluded from the anxiety group because her score was below 16 on the BAI and three people who were suffering from OCD were included in a small Pilot study. In addition, there were also five people who did not attend the research interview.

The four participants who were excluded from the OCD group, all reported having made significant progress in terms of 'recovery from OCD', commenting that they would have reported a greater number and severity of symptoms several months earlier. Although reliant on subjective report of 'recovery', the data gathered from these participants raised some interesting possibilities. For example, it allowed some investigation as to whether appraisals for people who have 'recovered' from OCD are more similar to those made by the non-clinical group or those made by people still suffering with this disorder. Consequently, the decision was taken to include the data from these four people in the results of the study.

2.3.MEASURES

Standard Measures

The three standard questionnaires described earlier were completed by all participants in the study i.e. the Beck Anxiety Inventory (BAI), the Beck Depression Inventory (BDI) and the Padua Inventory (PI). The Yale Brown Obsessive Compulsive scale (Y-BOCS) was also completed by people suffering from OCD. These scales were used to provide a measure of the levels of anxiety, depression and obsessive compulsive symptoms in each of the three groups. The Y-BOCS is a measure of severity of OCD.

It was necessary to include a measure of depression because the latter is associated with OCD, e.g. de Silva & Rachman (1992), Turner and Biedel (1992) and with anxiety, e.g. Watson and Kendall (1989) and is also known to affect appraisals e.g. Beck et al (1976). A measure of depression, in this case the BDI, was therefore needed in order to be able to control for depression and/or to be able to compare levels and affects of depression between the three groups.

This study also required participants to read four vignettes, each of which described a particular emotional situation. The four emotions were those of guilt, anger, pride and anxiety. In order to record the responses and appraisals relating to each of the vignettes a questionnaire was devised, based on the work of Manstead and Tetlock (1989). The questionnaire and vignettes were put together by the researcher, as will be described in the following section.

The following text provides more detailed information about each of the above measures:

The Beck Anxiety Inventory

The BAI is a self report measure of the severity of anxiety. It "was developed to address the need for an instrument that would reliably discriminate anxiety from depression while displaying convergent validity" (Beck et al 1988 p.893). This 21-item scale was developed from an initial pool of 86 items, which were drawn from three pre-existing scales. To complete the inventory the client has to rate each item on a scale of severity ranging from 'not at all' to 'severely' . The inventory is said to cover somatic symptoms, cognitive aspects such as 'fear of the worst happening' and panic-related aspects of anxiety. Generally, scores of 0-7 are described as 'minimal' levels of anxiety, scores of 8-15 as 'mild', scores of 16-25 as 'moderate' and scores of 26-63 as severe.

Beck et al (1988) carried out reliability tests for this measure and found it to have high internal consistency (.92) and high test-retest reliability, over one week (.75). In terms of validity, the discriminant and convergent validity is also reported to be good e.g. Beck et al (1988), Beck et al (1990).

The BAI has been quoted as having clinical and research advantages over other self report measures of anxiety e.g. Dobson (1985), Tanaka-Matsumi & Kameoka (1986) and as well as being a well accepted, reasonably reliable and valid measure of anxiety, it is relatively quick and easy to complete. It was on the basis of these strengths that the BAI was chosen for use in this study.

Having said this, there is only a limited amount of data relating to the use of the BAI with 'normal' adults e.g. Dent & Salkovskis (1986), and Beck et al (1990) suggest that the BAI's potential for detecting clinical anxiety in the non-clinical populations needs further investigation. However, despite this, the other advantages of this measure and the fact that

it was being used in a research focused capacity, not a clinical capacity, meant that the decision to use this measure with all three groups remained.

Beck Depression Inventory(BDI)

The BDI is a measure designed to assess severity of depression, originally designed by Beck et al in 1961. It has since become a widely accepted instrument for assessing intensity of depression in 'psychiatric' populations e.g. Piotrowski et al (1985) and for detecting possible depression in 'normal' populations, e.g. Steer et al (1985). The original BDI was based on clinical observations and descriptions of symptoms of depression, given by clients who were depressed. These items were systematically consolidated into a 21 item inventory. Each item consists of 4 self evaluative statements, which are rated on a four point scale of severity. The inventory covers affective, cognitive, motivational and physiological symptoms of depression, although some have said that it biases cognitive symptoms e.g. Gotlib & Cane (1989).

The BDI was not originally designed to screen for depression and there remains some debate about its reliability and validity in this. For example, Depue & Moore(1978) cautioned that high scores on the BDI may not necessarily be indicative of depression, but may be recording overall adjustment problems. Nevertheless, Beck et al (1990) suggest that a score of 15 or more may be a useful cut-off for indicating the presence of depression in a non-clinical population. It was a score below this cut-off point which was adopted for inclusion in the non-clinical group in this study (for both measures on the BDI and the BAI). Generally, a total score of 0-9 indicates a 'non-depressed state', 10-19 reflects a 'mild' level of depression , 19-26 a 'moderate' degree of depression and 26-63 a 'severe' level of depression.

In terms of reliability, the BDI has been shown to have high internal consistency in both clinical and non-clinical populations e.g. Beck et al (1987/88), but more variable test-retest results e.g. Beck et al (1987/88). It should be noted, however, that this variability may be due to the fact that depression is likely to change with time and/or therapy, so affecting the usefulness of this type of reliability testing.

In terms of validity it seems that "numerous studies have supported the convergent and discriminant validity of the BDI"(Beck et al 1988) e.g. Steer et al (1986/87).

The BDI was chosen for this study for similar reasons to those given for using the BAI i.e. it is a well accepted measure, which for the purposes of research is a reasonably reliable and valid measure of the severity of depression. It is also relatively quick and simple to complete and has potential for use with a non-clinical population.

The Padua Inventory

The Padua Inventory (PI) is a self - report measure of OC symptoms, where the person is asked to indicate on a scale of 1 to 4 how much disturbance is experienced by each of the thoughts and behaviours listed in the Inventory. The Inventory takes about 10-15 minutes to complete.

"The PI consists of 60 items describing common obsessional and compulsive behaviour and allows investigation of the topography of such problems in normal and clinical Ss" Sanavio (1988 p. 169). The scale items were originally developed from statements made by 28 clients suffering from OCD, where the statements were those which described the difficulties experienced as a result of OCD. Four factors are covered by the Inventory. These are impaired control over mental activities; becoming contaminated; checking

behaviours and urges and worries of losing control over motor behaviours. The PI is the only self-report measure which includes strong obsessional dimensions as distinct from compulsive dimensions (Sternberger & Burns 1990).

Sanavio (1988) showed this Inventory to have high internal consistency and satisfactory test-retest reliability over a thirty day period. The factorial structure and reliability of this measure has also been confirmed by others e.g. van Oppen et al (1995). In terms of validity, the PI is said to have good convergent and divergent validity e.g. Sanavio (1988), Sternberger and Burns (1990), Van Oppen et al (1995). The discriminant validity afforded by this scale is further highlighted in this quote by Sanavio (1988 p.169) " it *(the PI)* allows discrimination between a group of 75 outpatients with obsessive compulsive disorders and a similar group of outpatients with other neurotic disorders" .

The PI does have some limitations, in that there appear to be no available data on the standardisation of the Padua on a British sample. However, Dutch norms (see page 1 in the Appendix) have been named as being comparable to a British 'normal' sample on the Maudsley Obsessive Compulsive Inventory and it was these norms which were used as a guide when setting the inclusion criteria. For the purposes of this study it is also true to say that it is the difference in scores between the groups which is of most significance, rather than the measure of clinical severity in its own right.

The PI was chosen as a reliable, valid measure of OCD symptoms, which includes assessment of obsessional symptoms, and which can be used with both clinical and non-clinical populations.

Yale Brown Obsessive Compulsive Scale (Y-BOCS)

The Y-BOCS was developed to provide a measure of severity that could be calculated, independent of the type and number of obsessional symptoms (Goodman et al 1989). The scale was devised to be clinician rated, and to complete it the clinician has to rate severity of a number of specified symptoms e.g. time spent on obsessions, on a scale of 0-4. The Y-BOCS then gives an overall severity score, but also allows for scores relating to obsessions and compulsions to be calculated separately.

The inter-rater reliability and internal consistency are reported as being very good for this scale e.g. Goodman et al (1989), Woody et al (1995). The results of test -retest reliability were also good in one study (Kim et al (1990;1992), but were less convincing in another, where a longer interval was used (Woody et al 1995). However, the authors of the latter study conclude that the reliability levels could be considered good enough for use in research purposes.

In terms of validity the Y-BOCS has shown reasonable convergent validity (Goodman et al 1989), but seems weaker in terms of divergent validity e.g.Goodman et al (1989) and Woody et al (1995) both found that this measure correlated with measures of depression and anxiety and did not adequately distinguish OCD from these other types of disorders.

Nonetheless, the Y-BOCS has been identified as being a reliable and valid measure of severity of OCD in research trials and although it was developed on an American population, it has also been used in British studies, e.g. Insel et al (1983).

For the needs of this study the participants were asked to complete the core assessment sheet as a self-report measure. This was done with the help of the researcher, but without the lengthy interview that would usually be included if the scale was clinician rated. Having this measure of severity was not considered as an essential feature of the study, but was

included to provide further information about the participants suffering with OCD and to allow within-group comparisons in the OCD group should this be considered useful. Despite some of its limitations the Y-BOCS was chosen as the best scale to achieve this measure.

Any implications relating to the limitations on any of the measures used in this study will be covered more fully in the discussion.

Vignettes & Appraisal Questionnaire

Vignettes:

Recall of emotional situations relies on retrospective recall and is individually and socially biased, whereas vignettes avoid reliance on retrospective material and are thought to be only socially biased. Therefore, the decision to use vignettes as a way of creating an emotional situation and/or experience more easily allowed for a comparison of appraisals in a variety of emotional situations, where the idiosyncratic nature of emotional experience was controlled to a limited extent. The use of vignette material also served to reduce, a little, the amount of emotional processing required of the participants, so as to reduce the biases or interference this may also infer.

The choice of emotional situations was mainly made on the basis of which emotions had been named as having some association with OCD i.e. anger, anxiety and guilt. The fourth situation of pride was added as a positive emotional experience. The three other emotional situations are generally considered to be unpleasant and/or negative experiences. The inclusion of an emotional situation involving pride was made to balance this position and to enable comparison of appraisals with regard to an emotional situation which is generally regarded as a pleasant and/or positive experience. The exploration of responses to positive emotional experience tends to be a neglected area in clinical research, as most of the focus

tends to concentrate on the more obvious 'distress' in the clinical population. The decision to include a positive emotion is also supported by two specific points, noted from the literature which was reviewed. The first is that Rachman (1993) reported that people with OCD take much less responsibility for positive events. The second is that Reynolds & Salkovskis (1991) found that feelings of guilt were negatively correlated with pleasant intrusive thoughts.

The aim in developing the vignettes was to describe a situation which evoked the required emotions, in this case, emotions of guilt, anger and anxiety and pride. In order to do this the researcher first drafted 12 vignettes, three for each emotion to be studied. The vignettes were all based around a fictitious story, but also included descriptions of the relevant emotional experience i.e. the researcher created a stimulus story, which attempted to evoke a particular emotional experience through the description of affective, cognitive and motor components commonly associated with that emotion. So, for example, one of the stories evoking anger was about being let down and made a fool of by ones' boss, but also included common descriptors of an angry feeling such as clenched fists and jaw, "feeling as if you are about to burst" and "feeling like hitting something". The original vignettes were written in liaison with the research supervisors.

The next step was to identify which of the vignettes evoked the required emotions most effectively. With one person writing the vignettes it was considered likely that there would be a bias toward that person's own experience of these emotions. Consequently, in an attempt to control for this, nine other people were asked read the 12 vignettes and answer the following questions:

1) What emotion(s) they might be left feeling if they had been in the same situation as the person described in the story?

2) What emotion they were left thinking about or feeling most strongly after reading the story?

3) How strongly they thought they would feel the relevant emotion if they were in the same situation as the one described in the story? (The readers were asked to rate this by circling a number from 1-10: 10 indicating very strongly and 1 indicating not at all strongly).

The people asked to read the vignettes were all known to the researcher, but were not aware of any details of the study which would be likely to bias their responses. This group included both males and females, four and five people respectively, who ranged in age from 27 to 56 years. In order to control for practice effects each individual was instructed to read the vignettes in a different, randomised order.

The final vignettes were chosen according to the responses given to each of the questions described earlier i.e. those which produced a) the most consistent responses in terms of questions 1 & 2 and b) gave the highest ratings in terms of strength of feeling. These criteria were used to ensure, as far as possible, that a fairly 'pure' and easily identifiable emotion was present in each situation, which in turn was likely to evoke that same feeling to some degree in any reader.

In addition, Scherer (1993) stated that if one asks about hypothetical others, then one is less likely to access cognitive appraisals; hence the decision to write all the stories using the pronoun you. Also, where gender specific words were apparent two forms of the same vignette were used, one for each gender. The vignettes were also designed to all begin with the words "Imagine that" and were all written in the present tense. Finally, each vignette

was subjected to a Flesch Readability test, to ensure that the readability was average, or below i.e. above 60 on the Flesch test.

As well as addressing some of the issues of standardisation, between vignettes, these decisions were also made in an attempt to make the vignettes as 'immediate and real' as possible. The aim of this was to encourage the reader to identify as far as possible with the emotion in each scenario, whilst not being diverted or consumed by some of the factors e.g. extreme emotional intensity or understandable wariness, which might be experienced if one was being asked to talk about 'true' experiences in detail. It was hoped that in this way one would elicit the 'best of all worlds' in terms of comparable, valid, but uninhibited responses.

Appraisal Questionnaire

As one studies the cognition-emotion literature it becomes clear that it is inherently difficult to measure appraisals sensitively and accurately. With obvious alterations, the construction of this questionnaire was based, to a large extent, on the work of Manstead and Tetlock (1989). These authors asked each participant to rate her/his appraisals of an identified emotional situation on a Likert scale. Drawing on both the named appraisals and the methodology used by these and other authors, e.g. Smith and Ellsworth (1985), this Appraisal Questionnaire was formed, as described below:

It was recognised that despite the careful construction of the vignettes, that different people may have different emotional reactions to the same story. Consequently, in order to be able to check that individuals were rating appraisals about the experience of similar emotions the first section of this questionnaire asked people to a) describe the feelings they were left with most strongly after reading the story and b) describe the feelings that they might experience

were they to find themselves in the situation written about in the story. A 7 point Likert scale was also included to measure strength of emotion.

From consideration of the literature and the perceived relevance to OCD, the appraisal dimensions chosen for this study included responsibility (self and other); threat (in terms of harm, both to self and others) and control (self, other and situational). Situational control was used to refer to whether or not the situation was perceived to be out of anyone's control i.e. a matter of chance. The choice of appraisals also included appraisals of acceptability/unacceptability (of both actions and feelings). The reasons for including 'responsibility', 'control' and 'threat' probably needs little further explanation, as it is fairly clear in the literature that these are three 'appraisal dimensions' which have been associated specifically with OCD. The inclusion of 'acceptability' was made with reference to the quote by Rachman and Hodgson (1980), see p24 of the Introduction, and was seen as relating to perfectionistic/high standards and beliefs relating to the 'acceptability of one's own thoughts and behaviours. It was also seen to relate to the idea that people with OCD were thought to find it difficult and/or unacceptable to express certain emotions e.g. Ryz (1993). A measure of perceived unpleasantness was also included.

Manstead & Tetlock (1989) used a Likert scale to measure strength of appraisals. This was replaced with an analogue scale in this study, in order to a) increase the sensitivity of the measurement and b) to allow increased individual differences to be shown e.g. Pfennings et al(1995) and c) to avoid the possibility of participants giving only neutral responses. The questionnaire asked the reader to think about how he/she would appraise the situation he/she had just read and to indicate his/her response by placing a cross on the corresponding line scale. The line scales were marked at either end to indicate a high or low level of the appraisal. The response scale on which the cross was to be placed looked like this:

TOTALLY RESPONSIBLE — NOT AT ALL RESPONSIBLE

|----------|

There were a total of fourteen appraisal dimensions, each measured on an analogue scale.

The researcher chose to use single words to describe each appraisal dimension (see Item 5 in the Appendix for copy of the Questionnaire). The reasons for this decision, and the limitations associated with it are covered in the discussion.

The final part of the questionnaire asked the participants in each of the clinical groups to describe the symptoms/difficulties they were experiencing as part of OCD or anxiety disorder. They were also asked to rate how likely it would be for these difficulties to be triggered by the situation described in the story or in another situation which involved similar emotions. These questions were included to gather information about the subjective experience of symptom distress, which could be added to the objective measures and to create the potential for correlation of appraisal responses with symptom occurrence; albeit through subjective perception.

As a final point with regard to this questionnaire, it is recognised that the reliability and validity of this measure were not fully tested (see Chapter 5, Section 5.2. for further discussion of this point).

Demographic and Treatment Information

If, as in cognitive theory, one assumes that cognitive schema and appraisals are formed from early life experiences, then age becomes an important variable when one is researching these phenomena. Gender has also been shown to influence situation perception e.g. Torestad et al (1981) and the intellectual ability and level of responsibility a person held were also assumed to be variables that may influence the nature of cognitive appraisals. Consequently, in order to enable comparison and effects of these variables between the groups gender, occupation and date of birth were recorded for each participant. Occupation was used as a crude guide to intellectual ability and current occupational responsibility. In order to achieve this the researcher coded occupation according to the following criteria:
Level of responsibility (R) and intellectual ability (I) were each rated on a 4 point scale where 1 indicated a low level and 4 indicated a high level.

Occupations were grouped and coded in the following way:

Directors/managers/editors: R=4; I=3

Accountants/pharmacists/researchers/engineers: R=3; I=4

Teachers/nurses/fire and police service: R=3; I=3

Secretaries/Clerks/ administrators/sales/office workers/nursing assistants: R=2; I=2

People who were unemployed, but had a prior degree: R=1; I=4

Retired/housewife: R=1; I=4

If anyone was studying for a degree course as well as working the "I" score was adjusted to reflect this.

It is recognised that this is a very crude procedure, which may negatively affect the results for people who are not working due to current mental health difficulties. However, this area was not a main focus of the research and so, with this in mind, this measure was

considered as an appropriate way of enabling some comparison of these variables between the groups.

With regard to the two clinical groups, each participant was also asked to answer a number of other questions, such as what treatment they were currently receiving and what medication they were currently taking (see Item 7 in the Appendix for full details of the questions asked). These variables were included for the same reasons as the previous demographic variables, in that they could be used to provide supplementary information and/or because they were assumed to have a possible influence on cognitive appraisals.
This information was collected on a "Research Assessment Sheet" (see Item 7 in the Appendix for copy of this sheet).

PROCEDURE

The procedure described below includes the pilot study and the procedure for the main study.

2.4.The Pilot Study

The vignettes and the Appraisal Questionnaires were developed by the researcher and so to test the face validity of measurement and to ensure that both could be easily understood by participants from a clinical population a small pilot study was conducted. It is recognised that this pilot study is very small and a larger pilot study would be recommended. The three participants who took part in the pilot study were all people who were suffering with OCD.

In order to carry out the pilot study, the procedure, which will be described in the following pages, was followed through with the first three clients who agreed to participate.

The completion of the pilot study enabled the following points to be confirmed:

a) the analogue scale enabled individual differences in the responses to be recorded

b) overall, the vignettes were evoking the desired emotional experiences (with the adjustments, as described below)

c) the vignettes and Appraisal Questionnaires were easily understood (with a few minor adjustments as described below).

From the results of the pilot study it became apparent that in order to detect differences in appraisals the vignettes would need to describe a situation where a variety of appraisals could potentially be triggered e.g. responsibility could be attributed to self and/or to other, rather than clearly being attributable in just one direction. Otherwise, each participant is

more likely to record the same response. With this point in mind, it was ensured that each of the vignettes was designed to include a degree of ambiguity.

The pilot study also highlighted a few words and phases which seemed to cause confusion for the participants. Where this was the case the wording was altered to be less confusing.

2.5. The Main Study

Once an individual had agreed to participate in the study a time was arranged for that person to meet with the research interviewer. Wherever possible this was arranged at the same community setting. However, for the convenience of clients, people were sometimes seen in alternative community locations.

At the beginning of the interview participants were asked to confirm that they had read the Information Sheet, were given another opportunity to read it if necessary and were offered an opportunity to ask any questions. They were then asked to complete the consent form. It was also recommended that the relevant GPs were sent a standard letter (see Item 9 in the Appendix) and a copy of the Information Sheet, and so it was confirmed with each participant from the clinical groups that he/she was happy for this to happen.

To begin the interview the researcher read the instruction sheet (see Item 12 of Appendix for copy of instruction sheet). The participants were also reminded that they could ask questions at any point.

Following this, participants were asked to read the first vignette and then to complete the Appraisal Questionnaire, immediately afterwards. This process was repeated for each of the four vignettes; the order of presentation of vignettes being randomised for each participant.

Next, participants were asked to provide the demographic information, as described above, and finally they were asked to complete the standard questionnaires.. The research interviewer remained present throughout.

At the end of this interview, which usually lasted between 1hour 15 minutes and 1hour 30 minutes, the participants were given an opportunity to ask any further questions and/or to talk about any 'uncomfortable' feelings resulting from completing the questionnaires. The aim of this 'de-briefing' was to ensure that no participant left the research interview with increased negative feelings, as a result of this experience.

Scoring

The standard questionnaires were all scored after completion of each interview and recorded on a coded Results Sheet. (see item 6 in the Appendix for a copy of this sheet). The appraisals were scored by measuring the distance from the left end of the line to where the participant had marked a cross; being measured to the nearest half centimetre. These scores were also added to the Results Sheet.

Chapter 3: RESULTS

3.1.The Participants

There were ten participants in each of the three groups. With regard to the two clinical groups the OCD group included two people who described their main symptoms as excessive washing only, three people who described their main symptoms as fear of contamination or excessive washing together with excessive checking behaviours; four people who described their main symptoms being the experience of intrusive thoughts and/or a fear of loss of control and one person who described his/her main symptoms as 'hoarding'. The anxiety group included eight people who described themselves as having a 'phobia' and two people who described themselves as having more general anxiety symptoms. The types of phobia included claustrophobia, agoraphobia, vomit phobia and social phobia.

At this point it may be noted that there is a variety of symptom experience in each of the groups. This raises some research implications, which will be covered more fully in the discussion.

Statistical analyses were carried out to test the difference between the three groups on a number of demographic variables. The details of the demographic information and the corresponding analyses are contained in the following tables. NB. Where the homogeneity of variance was equal between the three groups anova analyses were used and where this was not the case a non-parametric Kruskal-Wallis test was used.

GROUP	Number of Males	Number of Females
OCD	4	6
Anxiety	3	7
Non-clinical	5	5

TABLE 1: Gender of participants in each of the three groups.

GROUP	RANGE	MEAN	S.D.	F value	Sig. Value.
OCD	27-60	42.40	12.26	.422	.660
Anxiety	20-60	37.80	12.43		
Non-clinical	23-56	41.6	11.15		

TABLE 2: Age of participants in each of the three groups. Participants were matched for age within 11 years

GROUP	RANGE	MEAN	S.D.	Chi-square	Sig. Value.
OCD	9-40	23.5	11.87	14.676	.001
Anxiety	6-25	14.7	6.86		
Non-clinical	0-9	5.9	3.70		

TABLE 3: Level of depression in each of the three groups. The level of depression was measured by score on the Beck Depression Inventory.

GROUP	RANGE	MEAN	S.D.	F value	Sig. Value.
OCD	4-43	23.6	11.6	22.58	.000
Anxiety	19-48	29.4	9.11		
Non-clinical	0-14	4.00	4.22		

TABLE 4: Level of anxiety in each of the three groups. The level of anxiety was measured by score on the Beck Anxiety Inventory.

GROUP	RANGE	MEAN	S.D.	Chi-square	Sig. Value.
OCD	66-134	97.30	28.3	21.047	.000
Anxiety	4-52	33.50	17.36		
Non-clinical	0-34	18.40	10.07		

TABLE 5: Level of OC symptoms in each of the three groups. The level of OC symptoms was measured by the score on the Padua Inventory.

GROUP	RANGE	MEAN	S.D
OCD	19-30	22.00	4.3

TABLE 6: Severity of OCD, in the OCD group. The severity of OCD was measured by the score on the Yale Brown Obsessive Compulsive Scale.

GROUP	MEAN	S.D.	F value	Sig. Value.
OCD	3.00	.82	.448	.644
Anxiety	2.70	.83		
Non-clinical	3.00	.82		

TABLE 7: Level of intellectual ability in each of the three groups.

GROUP	MEAN	S.D.	F value	Sig. Value.
OCD	2.50	.85	2.83	.077
Anxiety	2.10	.88		
Non-clinical	3.00	.82		

TABLE 8: Level of responsibility in each of the three groups.

For variables of age, level of intellectual ability and level of responsibility the anova analyses showed no overall differences in scores on these three variables. Therefore, according to these results, one can assume that the three groups are reasonably matched in these areas.

With regard to the levels of anxiety in the three groups, the scores on the Beck Anxiety Inventory fell within the 'moderate', 'severe', and 'minimal' categories for the OCD, anxiety and non-clinical groups respectively. ('Minimal' is the term used to indicate the 'norm' for this measure). The anova analysis showed a significant difference between the three groups and the Scheffe post-hoc analysis showed that the differences lay between each of the clinical groups and the non-clinical group. There was no significant difference between the two clinical groups.(see page 7/8 of the Appendix for full details of this analysis). These results suggest that one can assume the OCD group and anxiety group to be have similar levels of anxiety, with the non-clinical group having significantly lower levels of anxiety than both of these groups.

With regard to levels of depression in the three groups, the scores on the Beck Depression Inventory fell within the 'moderate', 'mild' and 'non-depressed state' categories for the OCD, anxiety and non-clinical groups respectively. The Kruskal-Wallis analysis showed that the three groups were significantly different on this measure. However, a post hoc test showed that the only difference lay between the OCD and the non-clinical group. (see Page 7/8 of the Appendix for full details of the analysis). The scores on the measure of depression therefore seem to indicate a continuum of depression across the three groups, with the anxiety group falling between the other two groups. Clinically this raises some obvious, but important implications for interpretation of the results and the decision was therefore made to take into account the variable of depression throughout the analyses.

With respect to level of OC symptoms, the OCD group scores fell above what was regarded as the clinical cut off point on the Padua Inventory, whereas the scores of the other two groups fell below it. The Kruskal-Wallis test showed a significant difference between the three groups and the post hoc test showed this difference to be between the

OCD group and the other two groups. There was no significant difference between the anxiety group and the non-clinical group, (see page 7/8 of the Appendix for full details of the analysis). From these results one can assume that the anxiety group and the non-clinical group are relatively matched with regard to OCD symptomatology, with the OCD group having a significantly higher level of symptoms than the other two groups. The Y-BOCS scores suggests that the severity of OCD for the participants in the OCD group is moderate, rather than severe or mild (Goodman et al 1989).

The research study relied on being able to identify people with OCD, people with anxiety symptoms, but no OC symptoms and people suffering from no clinical symptoms associated with these disorders. The above results suggest that this distinction of groups was, in the main, successfully achieved.

In summary, the clinical categorisation of the three groups according to the scores on the assessment questionnaires suggests that the OCD group had much higher levels of OCD symptomatology, a slightly higher level of depression and a slightly lower level of anxiety than the anxiety group. The non-clinical group scores fell below the clinical range on all these measures.

The statistical analysis also showed that the two clinical groups differed significantly on the measure of OCD symptomatology, but on the measure of anxiety and depression the differences were not shown to be significant. The non-clinical group scores were significantly lower in all cases, except on the measure of depression, where, statistically there was no difference between the anxiety group and the non-clinical group. The latter result, together with reference to the raw scores, suggests a continuum of depression across the three groups.

3.2.The Emotions evoked by each of the vignettes.

The first part of the Appraisal Questionnaire asked the participants to answer two questions; i.e. what feelings they were left with after reading the story and what feelings they might experience if they were in a similar situation themselves. This was done a) to focus the attention of the participants on the emotion of the situation and b) to check that the desired emotions were being elicited by each of the vignettes. In the majority of cases the answers to these two questions were very similar, with only one notable discrepancy. In this case, the individual could relate to the person in the story feeling proud, but could not imagine feeling pride in that situation for herself.

Overall, it seemed that the desired emotions of anxiety, guilt, anger and pride were very successfully elicited with only a few notable exceptions. In summary, 100% participants gave descriptions which related to anxiety, fear or nervousness in response to the anxiety vignette; 90% participants gave descriptions which related to guilt in response to the guilt vignette; 90% of participants gave descriptions which related to anger in response to the anger vignette and 93% of participants gave descriptions which related to pride or happiness in response to the pride vignette. The cases where the desired emotion was not evoked were as follows:

One participant described feelings of arrogance in the situation of pride, one participant described feelings of worry in the situation of anger and one participant said they would not feel angry in this particular 'angry situation'. (It was unclear from this participants response whether or not he/she could relate to the character's feelings of anger) It is also true that for two other people the situation of pride was not perceived as a wholly positive experience since some negative feelings were also associated with this vignette. Finally, in three cases the participant did not use 'feeling words', but described thoughts or questions in his/her

mind. Where this is the case it is obviously difficult to be sure whether the desired emotion was actually evoked.

At this point it also seems relevant to mention an observation made by the researcher: it seemed that the people suffering with OCD found it more difficult to describe the emotions, took longer to do so, tended to write lengthy descriptions and seemed more concerned about describing the 'correct' emotion.

The reader is referred to pages 11-16 of the Appendix for full details of the results pertaining to the emotions described by the participants.

3.3. RESULTS I. Results for Hypotheses 1a-1d

A two-way analysis of variance, with one between subject variable (group) and fourteen within-subject variables (appraisal dimensions), was carried out to test the first hypothesis.

HYPOTHESIS ONE:

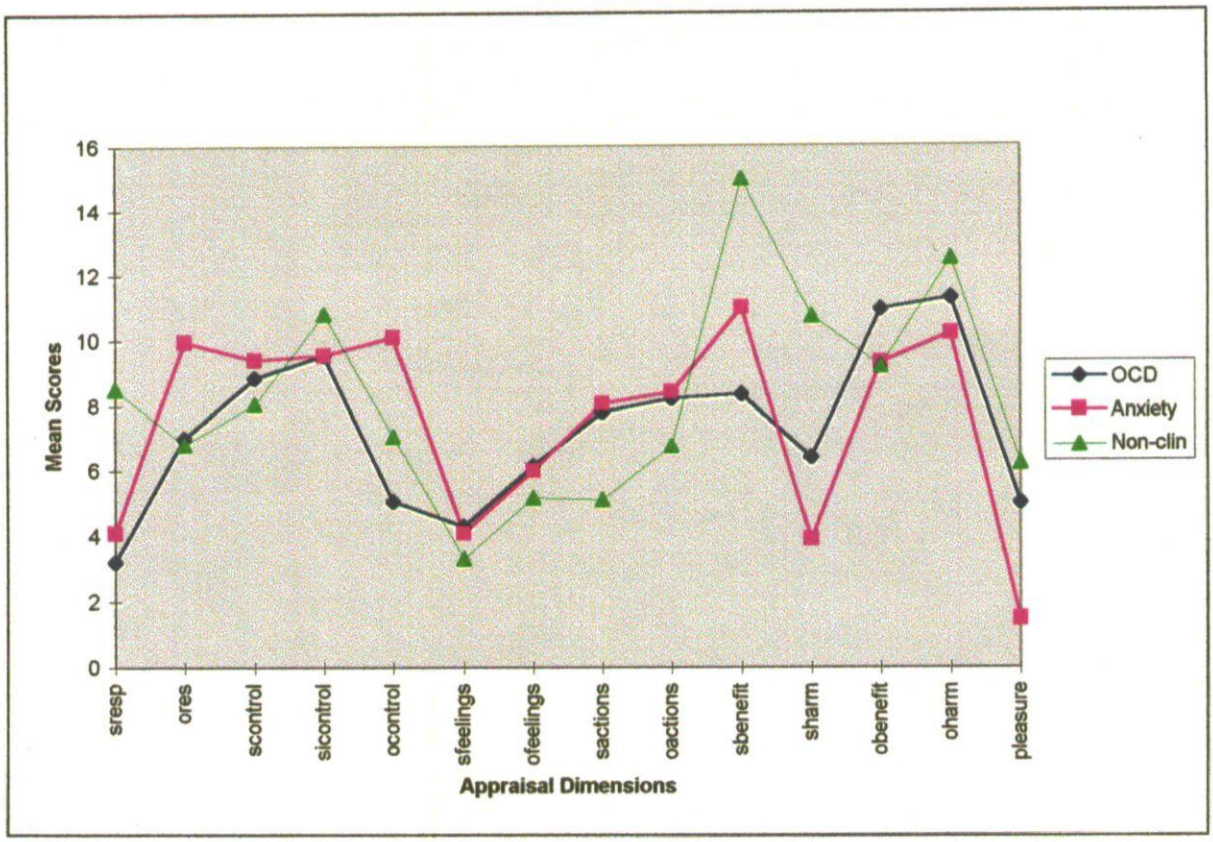
Hypothesis one (1a-1d) stated that in each of the situations of anxiety, anger and guilt, but not the situation of pride, the groups would show different profiles across the fourteen appraisal dimensions i.e. the 'emotional-cognitive profiles' of the three groups would be parallel in the emotional situations of pride, but not in the situations of anxiety, anger and guilt. The fourteen appraisal dimensions are described below:

The abbreviations in brackets are the abbreviations used in the following results tables:

Unpleasantness **(pleasure),**
Personal responsibility **(sresp),**
Responsibility of others **(ores),**
Personal control **(scontrol),**
Control of others **(ocontrol),**
Situational control **(sicontrol),**
Acceptability of one's own actions according to self **(sactions)**
Acceptability of one's own actions according to others **(oactions),**
Acceptability of one's own feelings by self **(sfeelings)**
Acceptability of one's own feelings by others **(ofeelings),**
'Harm to self' **(sharm)**
'Harm to others' **(oharm)**
Benefit to self **(sbenefit)**
Benefit to others **(obenefit).**

The following pages give a graphical representation of the results relating to each of the above hypothesis (1a-1d), along with details of each of the anova analyses.

NB. A higher score indicates a lower level of the appraisal in question e.g. a very high score on the appraisal of personal responsibility means that very little personal responsiblity is perceived.



GRAPH 1a - To show differences between the three groups on all the appraisal dimensions, in the situation of anxiety

KEY:

Pleasure = Unpleasantness
Sresp = Personal responsibility
Ores = Responsibility of others
Scontrol = Personal control
Ocontrol = Control of others
Sicontrol = Situational control
Sactions = Acceptability of one's own actions according to self
Oactions = Acceptability of one's own actions according to others
Sfeelings = Acceptability of one's own feelings by self
Ofeelings = Acceptability of one's own feelings by others
Sharm = 'Harm to self'
Oharm = 'Harm to others'
Sbenefit = Benefit to self
Obenefit = Benefit to others

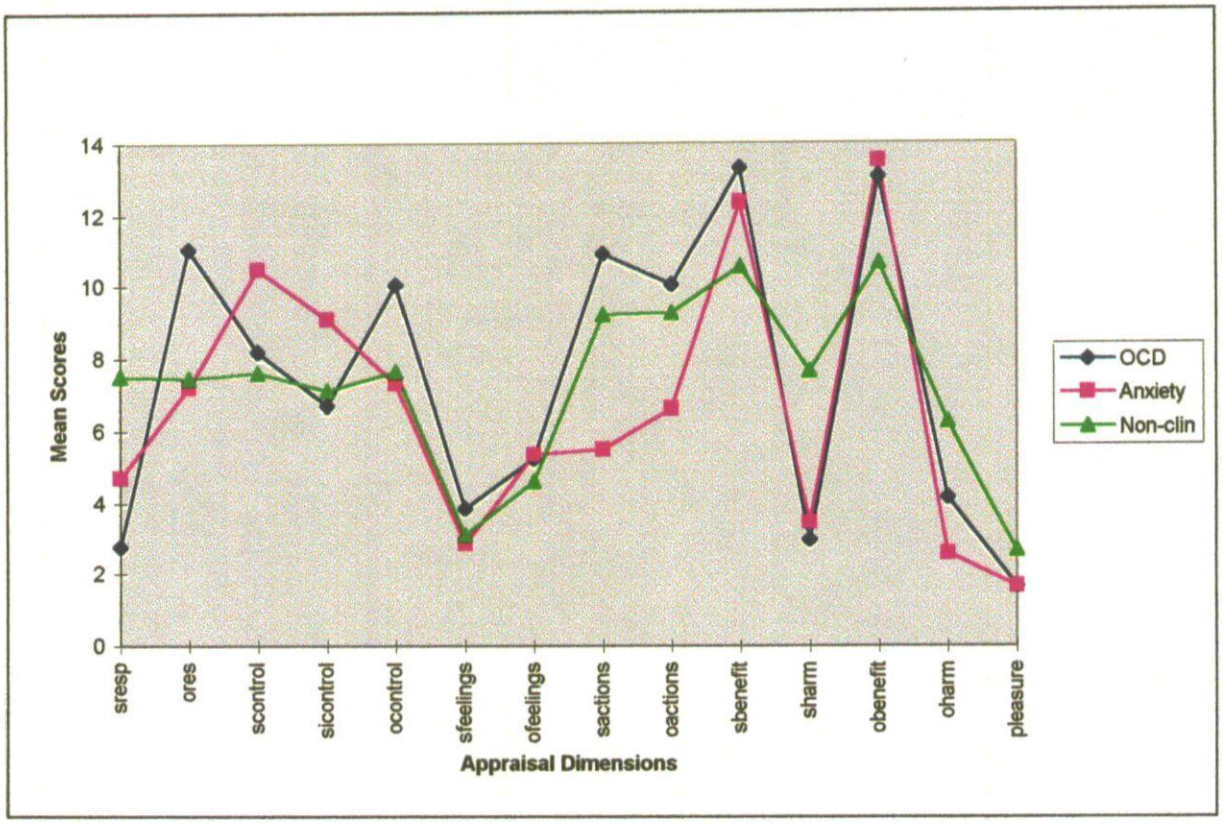
dimensions in the solution of inverse

KEY:

EFFECT	Df	F	Sig.
Appraisal effect	13	7.389	.000
Group effect	2	.149	.863
Appraisal by group	26	2.160	.001
Appraisal effect: depression controlled	13	3.5	.000
Group effect: depression controlled	2	.356	.704
Appraisal by group: depression controlled	26	2.048	.002

TABLE 9: To show results of repeated measures anova in the situation of anxiety.

The above analysis showed a significant interaction between group and scores on the appraisal dimensions. This suggests, as does observation of the graph (Graph 1a), that the three groups show different 'emotional-cognitive profiles' as measured by the fourteen appraisal dimensions, in the situation of anxiety. Therefore, Hypothesis 1a is supported. This effect remained when the variable of depression was controlled for in the analysis.



GRAPH 1b- To show differences between the three groups on all the appraisal dimensions, in the situation of guilt

KEY:

Pleasure = Unpleasantness
Sresp = Personal responsibility
Ores = Responsibility of others
Scontrol = Personal control
Ocontrol = Control of others
Sicontrol = Situational control
Sactions = Acceptability of one's own actions according to self
Oactions = Acceptability of one's own actions according to others
Sfeelings = Acceptability of one's own feelings by self
Ofeelings = Acceptability of one's own feelings by others
Sharm = 'Harm to self'
Oharm = 'Harm to others'
Sbenefit = Benefit to self
Obenefit = Benefit to others

Figure 6: *Mean differences between the three groups on all the appraisal dimensions in the situation of guilt*

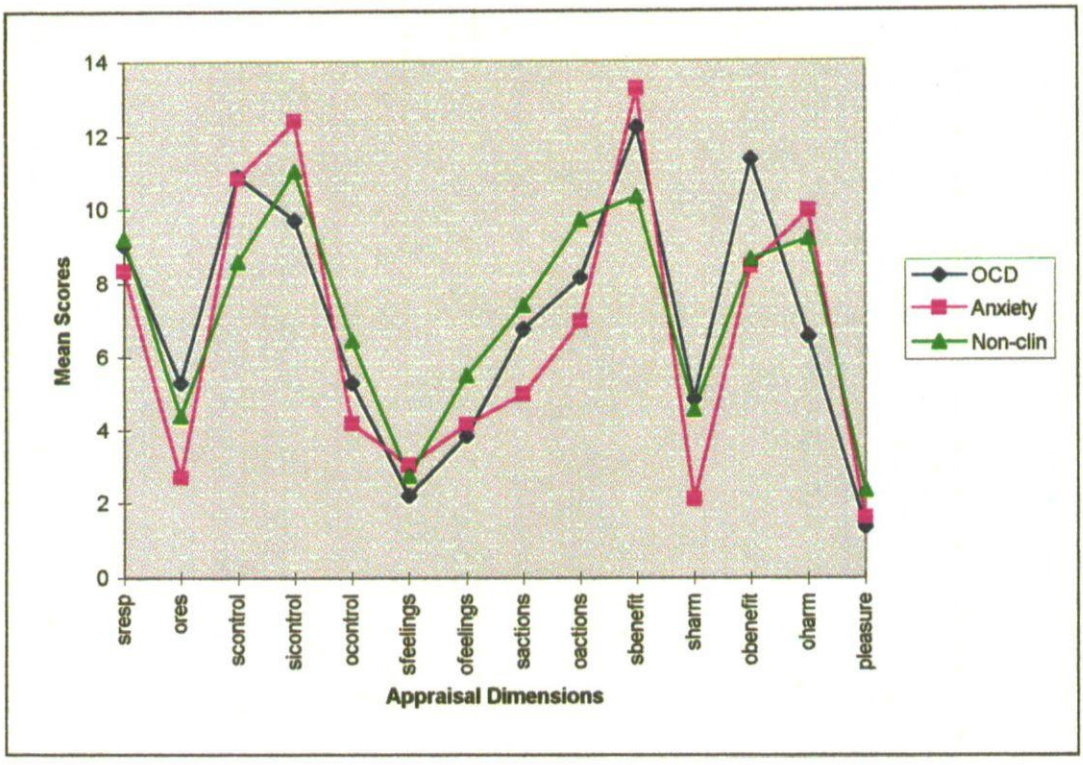
Key:

Pleasure = Enjoyment
Sleep = Problems in sleeping
Free = Keep mobile
Neutral = Personal control
Control = Control others
Neutral = Neutral control
Situation = Judge guilt according to self
Outcome = Responsible for outcome according to self
Stealing = Judge guilt according to self
Stealing = Judge guilt according to others
Shame = Shame to self
Object = Blame to object
Self guilt = Blame to self
Other guilt = Blame to others

EFFECT	Df	F	Sig
Appraisal Effect	13	19.502	.000
Group Effect	2	1.405	.263
Appraisals by group	26	2.048	.002
Appraisal Effect: depression controlled	13	6.869	.000
Group Effect: depression controlled	2	1.663	.210
Appraisal by group: depression controlled	26	1.794	.001

TABLE 10: To show results of repeated measures anova in the situation of guilt

The above analysis showed a significant interaction between group and scores on the appraisal dimensions. This, along with observation of the graph (Graph 1b) suggests that the groups show different 'emotional-cognitive profiles', as measured by the fourteen appraisal dimensions, in the situation of guilt. Therefore, Hypothesis 1b is also supported. This effect remained, and in fact increased in significance, when the variable of depression was controlled for in the analysis.



GRAPH 1c - To show differences between the three groups on all appraisal dimensions in the situation of anger

KEY:

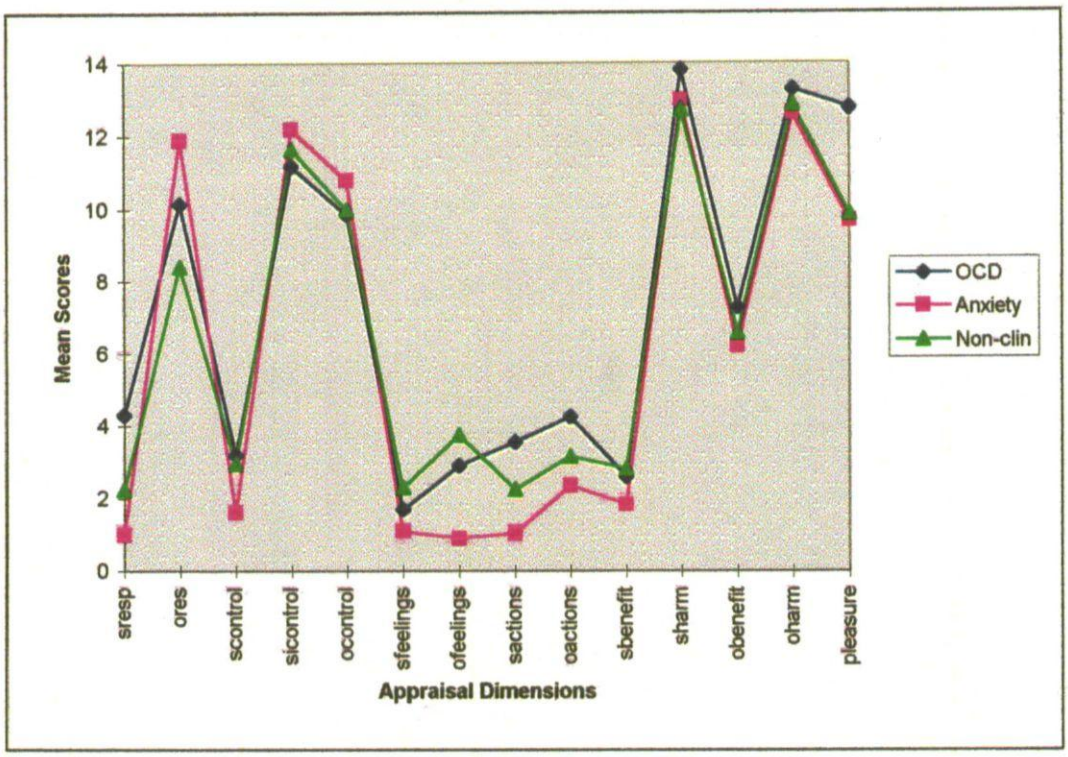
Pleasure = Unpleasantness
Sresp = Personal responsibility
Ores = Responsibility of others
Scontrol = Personal control
Ocontrol = Control of others
Sicontrol = Situational control
Sactions = Acceptability of one's own actions according to self
Oactions = Acceptability of one's own actions according to others
Sfeelings = Acceptability of one's own feelings by self
Ofeelings = Acceptability of one's own feelings by others
Sharm = 'Harm to self'
Oharm = 'Harm to others'
Sbenefit = Benefit to self
Obenefit = Benefit to others

KEY:

EFFECT	Df	F	Sig
Appraisal Effect	13	19.046	.000
Group Effect	2	.548	.585
Appraisal by group	26	.989	.483
Appraisal Effect: depression controlled	13	7.394	.000
Group Effect: depression controlled	2	.727	.494
Appraisal by group: depression controlled	26	1.217	.219

TABLE 11: To show results of repeated measures anova in the situation of anger

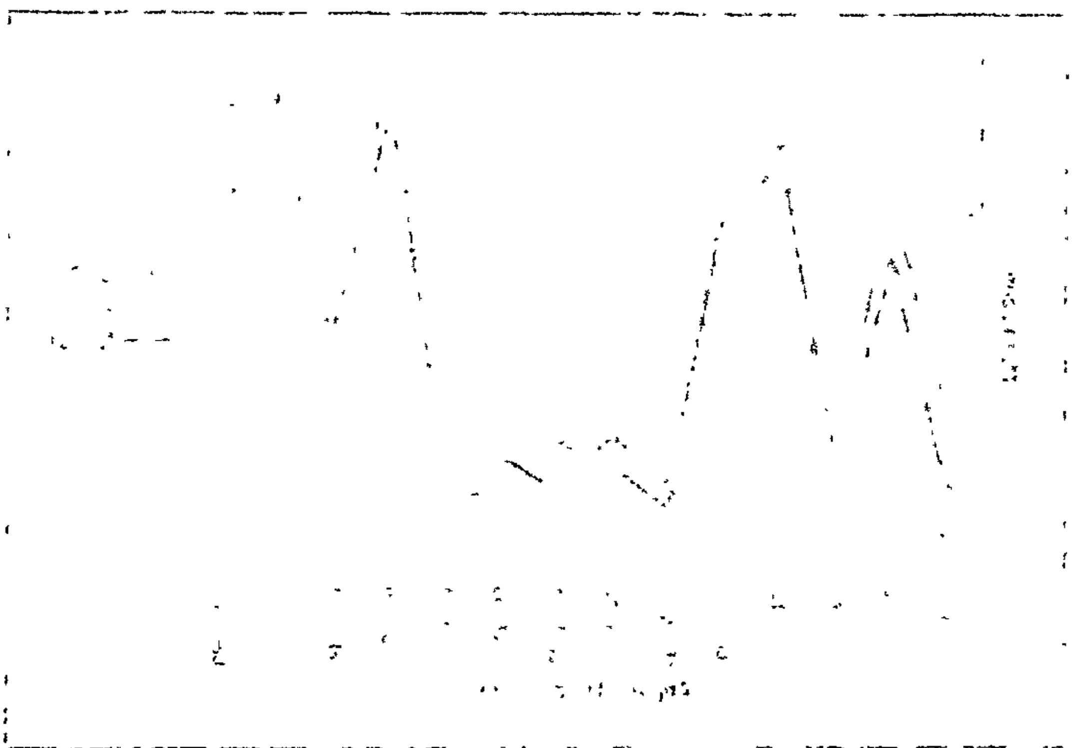
The above analysis showed no significant interaction between group and scores on the appraisal dimensions. This, along with observation of the graph (Graph 1c) suggests that the group do not show different 'emotional-cognitive profiles', as measured by the fourteen appraisal dimensions, in the situation of anger. Therefore, Hypothesis 1c is not supported. This effect remained non-significant when the variable of depression was controlled for in the analysis.



GRAPH 1d - To show differences between the three groups on all appraisal dimensions in the situation of pride.

KEY:

Pleasure = Unpleasantness
Sresp = Personal responsibility
Ores = Responsibility of others
Scontrol = Personal control
Ocontrol = Control of others
Sicontrol = Situational control
Sactions = Acceptability of one's own actions according to self
Oactions = Acceptability of one's own actions according to others
Sfeelings = Acceptability of one's own feelings according to self
Ofeelings = Acceptability of one's own feelings according to others
Sharm = 'Harm to self'
Oharm = 'Harm to others'
Sbenefit = Benefit to self
Obenefit = Benefit to others



GRAPH III - ... differences between the three groups on all aspects of dimensions ... evaluation of prod...

KEY:

[illegible]

EFFECT	Df	F	Sig
Appraisal Effect	13	57.30	.000
Group Effect	2	5.021	.015
Appraisal by Group	26	1.044	.409
Appraisal Effect : depression controlled	13	21.819	.000
Group Effect: depression controlled	2	3.577	.044
Appraisal by Group: depression controlled	26	1.477	.066

TABLE 12: To show results of repeated measures anova in the situation of pride

The above analysis showed no significant interaction between group and scores on the appraisal dimensions. This, along with observation of the graph (Graph 1d) suggests that the groups do not show different 'emotional-cognitive profiles', as measured by the fourteen appraisal dimensions in the situation of pride. Therefore, hypothesis 1d is supported. The interaction effect remained non-significant when depression was controlled for in the analysis.

3.4. RESULTS II. Results for Hypotheses 2-6

Hypotheses 2-6 make specific predictions about the group differences on specific appraisal dimensions. To test these hypotheses one-way anovas were first carried out to confirm a difference between the three groups, on the appraisal dimension in question, and then contrast t-tests were used to test the specific, a priori predictions, when appropriate. A summary of these analyses is given below, along with a description of the results, as they relate to each hypothesis. Where the variance between the groups was unequal the results which reflect this are the ones reported. Also, unless otherwise stated, it can be assumed that the data, on any given variable was not found to be skewed.

(Unless otherwise stated, the reader is referred to pages 23-25 of the Appendix for the details of any analysis results which are not reported in the following text).

HYPOTHESIS TWO:

Hypothesis two stated that the OCD group would perceive more personal responsibility than the other two groups in situations of anxiety and guilt (part 2), but not in situations of anger and pride (part 2a).

The results of the one-way anova showed a significant, between group difference on this appraisal in the situations of anxiety, guilt and pride. When the co-variate depression was controlled for in the analysis, this difference disappeared in the situations of guilt and pride, but remained in the situation of anxiety. Given the presence of a group difference, contrast t-tests were carried out to ascertain whether this difference lay in the predicted positions.

GROUP CONTRASTS	t	df	Sig.
OCD with Anxiety	-.472	27	.640
OCD with Non-clinical	-2.782	27	.010
Anxiety with Non-clinical	-2.310	27	.029

TABLE 13: To show results of contrast t-tests for appraisal of perceived personal responsibility in the situation of anxiety.

GROUP CONTRASTS	t	df	Sig.
OCD with Anxiety	-1.282	27	.211
OCD with non-clinical	-3.123	27	.004
Anxiety with non-clinical	-1.841	27	.077

TABLE 14: To show results of contrast t-tests for appraisal of perceived personal responsibility in situations of guilt.

GROUP CONTRASTS	t	df	Sig.
OCD with Anxiety	2.608	27	.015
OCD with Non-clinical	1.620	27	.117
Anxiety with Non-clinical	-.988	27	.332

TABLE 15: To show results of contrast t-tests for appraisal of perceived personal responsibility in situations of pride.
(nb. The data for the anxiety groups was found to be skewed in the situation of pride, so, as parametric tests were used a little caution in the interpretation of these results is probably advised.)

In the situations of anxiety and guilt the t-test results show the scores in the OCD group to be significantly different to the scores in the non-clinical group, as predicted. The difference is also in the predicted direction. However, the results show no difference between scores in the two clinical groups. Therefore, hypothesis 2 is only partly supported.

In addition, the significant difference between the anxiety group and the non-clinical group, in the situation of anxiety, also seems worthy of note. Also, the nature of the raw scores suggests a continuum of scores on this appraisal, with the OCD group perceiving the most personal responsibility, the anxiety group scores falling in the middle and the non-clinical group perceiving the least personal responsibility.

In the situation of pride, there was a significant difference between the two clinical groups, the anxiety group perceiving significantly more personal responsibility than the OCD group. There was no significant difference between the groups in the situation of anger, but with the presence of the significant difference in the situation of pride this means that part 2a of this hypothesis is again only partly supported.

Although no specific hypotheses were made about the appraisal of 'responsibility of others', the was the obvious place to comment on the observation that the mean raw scores on this appraisal showed the OCD to perceive less responsibility, than the other two groups, in the situation of guilt. (The differences between the groups did not reach statistical significance; see page 28 of the Appendix for details of this additional analysis).

HYPOTHESIS THREE:

Hypothesis three stated that the two clinical groups would perceive less personal control than the non-clinical group in situations of anxiety(part 3), the OCD group would perceive less personal control in the situation of guilt (part 3a), with no differences between the three groups in situations of anger and pride (3b):

The one-way anova did not show any significant differences between the three groups, in any of the emotional situations, which means that part 3b is supported, whilst parts 3 & 3a are not.

Again no specific hypotheses were made with respect to the appraisal 'control of others', but the mean raw scores on this appraisal dimension suggest that the OCD group perceived greater control of others in the situation of anxiety, and greater situational control in the situation of guilt (However, the differences between the groups did not reach statistical significance; see Page 28 of the Appendix for results of this additional analyses)

HYPOTHESIS FOUR:

Hypothesis four stated that in the situations of anger and guilt the OCD group would find the feelings of anger and guilt less acceptable than the other two groups. This appraisal dimension has two aspects, one relating to acceptability according to self and one relating to acceptability according to others.

The results of the anova analyses showed no significant differences between the groups, on any aspect of this appraisal, in either of the situations of guilt or anger. Hypothesis four is therefore not supported.

However, although weakened by the absence of statistically significant differences, the pattern of the raw scores again seems worthy of a mention. The mean scores in the OCD group suggest this group found the feeling of guilt to be the least acceptable, as expected, but the feeling of anger to be most acceptable when compared to the other two groups, the opposite of what was expected. In fact it was the anxiety group that found the feeling of

anger to be the least acceptable. The non-clinical group scores fell in the middle in each case.

HYPOTHESIS FIVE:

Hypothesis five stated that the OCD group would find their own actions less acceptable, in the situation of guilt, than in the other two groups. This appraisal dimension has two aspects, one relating to acceptability according to self and one relating to acceptability according to others.

The only significant difference shown by the one-way anova was on the appraisal of "acceptability of action according to self", in the situation of guilt. Given the presence of a group difference, contrast t-tests were carried out to ascertain whether this difference lay in the predicted position.

GROUPS	t	df	p
OCD with Anxiety	3.141	27	.004
OCD with Non-clinical	.989	27	.332
Anxiety with Non-clinical	-2.152	27	.040

TABLE 16: To show results of t-tests for appraisal of 'acceptability of one's own action according to self' in the situation of guilt.

The t-test results showed the scores in the OCD group to differ from the scores in the anxiety group. The difference was also in the predicted direction. However, this hypothesis cannot be fully accepted because there was no significant difference between the OCD group and the non-clinical group. In addition, there was an unpredicted difference between the anxiety group and the non-clinical group on this appraisal.

HYPOTHESIS SIX:

Hypothesis six stated that the two clinical groups would perceive more 'harm to self' than the non-clinical group, in the situation of anxiety (part 6), the OCD group will perceive more 'harm to self' than the other two groups, in the situation of guilt (part 6a). It also stated that there would be no differences on this appraisal dimension in the situations of pride and anger (part 6c).

The distribution of the data on this appraisal dimensions was skewed, in the anxiety group. As a parametric analysis was used some caution should perhaps noted in the interpretation of these results. However, with such a highly significant difference it is unlikely that this effect is due to chance.

The results of the one-way anova showed significant differences between the groups in the situations of anxiety and guilt, but not in the situations of anger and pride. When depression was controlled for in the analysis this effect remained in the situation of anxiety, but disappeared in the situation of guilt. Given the presence of a group difference, contrast t-tests were carried out on these scores to ascertain whether these differences lay in the predicted positions.

GROUPS	t	df	Sig.
OCD with Anxiety	1.365	26	.184
OCD with Non-clinical	-2.296	26	.030
Anxiety with Non-clinical	-3.624	26	.001

TABLE 17: To show results of contrast t-tests for appraisal of perceived harm to self in the situation of anxiety

GROUPS	t	df	Sig
OCD with Anxiety	-.322	27	.750
OCD with Non-clinical	-3.029	27	.005
Anxiety with Non-clinical	-2.707	27	.012

TABLE 18: To show results of contrast t-tests for appraisal of perceived harm to self in the situation of guilt

The t-tests showed that part 6 and part 6c of the Hypothesis are supported, as the scores in both clinical groups were significantly different to the scores in the non-clinical group in the situation of anxiety and there were no differences on this appraisal in the situations of anger and pride. In the situation of anxiety, the difference between the anxiety group and the non-clinical group on this appraisal is significant at a higher level, than the difference between the OCD group and the non-clinical group. The differences were also in the predicted direction.

However, part 6b of this hypothesis cannot be fully supported because the scores in the anxiety group, as well as the OCD group, were shown to be significantly different to those in the non-clinical group, in the situation of guilt. Two further points are also worthy of note; first that the latter effect was more significant for the OCD group difference, than the anxiety group and the second that, in the situation of guilt, the group differences are lost when depression is controlled for in the analysis.

Below is a brief, overall summary of the results pertaining to hypotheses 2-6:

The three appraisal dimensions where either or both the clinical groups were seen to differ significantly from the non-clinical group were those of perceived personal responsibility, perceived harm to self and acceptability of one's own actions according to self.

People suffering with OCD, and people suffering with high levels of anxiety, in the absence of OC symptoms, perceived more personal responsibility in situations of anxiety than people in the non-clinical group. Although the significance of the effect is similar in each case it is slightly greater for the OCD group. People suffering with OCD also perceived more personal responsibility in the situation of guilt, than people in either of the other two groups.

With respect to the appraisal perceived harm to self, the two clinical groups perceive more harm to self than the non-clinical group, in both the situations of anxiety and guilt. On this appraisal, in the situation of anxiety, the effect is more significant for the anxiety group. However, in the situation of guilt, the group differences disappear when depression is controlled for in the analysis.

Finally, in the situation of guilt, people suffering from OCD perceived their own actions to be as acceptable as people in the non-clinical group, whereas the anxiety group found their own actions to be more acceptable.

HYPOTHESIS SEVEN:

Hypothesis seven stated that appraisals of high levels of harm to self and appraisals of high levels of personal responsibility will be significantly correlated with perceived likelihood of the occurrence of symptoms of OCD. It also stated that only appraisals of high levels of perceived harm to self will be correlated with perceived likelihood of the occurrence of symptoms of anxiety.

A Pearson product moment correlation was carried out to test this hypothesis:

Key relating to following table:

Sympt = Perceived likelihood that symptoms will occur in the specific situation described in the vignette.

Sympt2= perceived likelihood that symptoms will occur in other situations which evoke the emotion in question.

	Group			
	OCD		Anxiety	
Appraisal Dimension	**Sympt**	**Sympt2**	**Sympt**	**Sympt2**
Personal responsibility: Situation of anxiety	-.011	-.153	-.245	-.307
Self Harm: Situation of anxiety	.902**	.781**	.071	.051
Personal responsibility: Situation of guilt	.483	.640*	-.189	-.142
Self harm: Situation of guilt	.841**	.789**	.326	.093
Personal responsibility Situation of anger	.241	.278	-.110	.083
Self harm: Situation of anger	.117	.047	.075	.418
Personal responsibility: Situation of pride	-.268	.429	.060	-.535
Self harm: Situation of pride	.007	.132	-.480	-.219

* indicates significance at the 0.05 level
** indicates significance at the 0.01 level

TABLE 19 : To show correlation between appraisals of personal responsibility and perceived harm to self with perceived likelihood of occurrence of symptoms, in the two clinical groups, in the situations of anxiety, guilt, anger and pride.

The results relating to hypothesis seven are reliant on self-reported likelihood of symptom occurrence, but with this in mind, they show significant correlations between perceived symptom likelihood in the OCD group with the appraisal of perceived self harm in both situations of anxiety and guilt and the appraisal of perceived self responsibility in situations of guilt. These correlations are as predicted, but the hypothesis can only be partly supported because there were no significant correlations in the anxiety group.

With respect to the results regarding perceived personal responsibility, the correlation only existed when participants were asked to decide whether symptoms would occur in other situations of guilt; there was no significant correlation relating to the specific situation described in the vignette. The situation where both of these appraisals are correlated with symptoms is that of anxiety.

In summary, appraisals of perceived harm to self seem to be linked to OC symptomology in both situations of anxiety and guilt, but appraisals of responsibility seem to be linked to OC symptomology in situations of guilt, not anxiety and then, it seems, only in certain types of situations, not necessarily the situation of guilt used in this study. With respect to the anxiety group, appraisals of self harm were not linked to symptoms of anxiety, in the absence of the symptoms of OCD.

3.5. RESULTS III: Results from the four participants who had 'recovered' from OCD.

Four of the participants gave self reports that they were somewhat 'recovered' from OCD. The scores on the Padua Inventory (PI)also confirmed that the scores of these participants fell outside the clinical range. There were obviously no previous PI score with which to compare this, but it was, nevertheless, taken as supportive evidence that these four people were, indeed, 'recovered'.

This data was used to assess how, or indeed if, the nature of appraisals was seen to change when someone moves from a person who suffers from OCD to someone who is 'recovered' from this disorder. In this case this was done by comparing each appraisal score, for each participant who had 'recovered', to the mean score of the clinical OCD group.

The tables below give a summary of the most notable changes in appraisal scores for the 'recovered' OCD group, when compared to the OCD mean group scores. The results are only reported where the appraisals of all, or three out of the four, participants were seen to change in the same direction. For full details of this data the reader is referred to pages 19-20 of the Appendix.

Appraisal Dimension	How it changed in comparison to the mean scores in the OCD group
Unpleasantness	Perceived more pleasure in this situation
Personal responsibility	Perceived about the same level of personal responsibility
Control of others	Perceived others as having less control
'Harm to self'	Perceived more 'harm to self'
Benefit to others	Perceived less benefit to others.

TABLE 20: To show the differences on the appraisal dimensions between the four participants who had 'recovered' from OCD and the OCD group, in the situation of anxiety. *(NB. Only those differences where all, or three out of the four participants changed in the same direction are given)*

Appraisal Dimension	How it changed in comparison to the mean scores in the OCD group
Acceptability of actions according to others.	Actions more acceptable to others.
Acceptability of feelings according to others	Feelings more acceptable to others.
Control of others	Perceived others as having less control
'Harm to self'	Perceived less 'harm to self'
Benefit to self	Perceived more benefit to self.

TABLE 21: To show the differences on the appraisal dimensions between the four participants who had 'recovered' from OCD and the OCD group, in the situation of guilt. *(NB. Only those differences where all, or three out of the four participants changed in the same direction are given)*

Appraisal Dimension	How it changed in comparison to the mean scores in the OCD group
Unpleasantness	Perceived less unpleasantness.
Responsibility of others	Perceived more responsibility of others.
Control of others	Perceived others as having more control
Personal control	Perceived less personal control
Situational control	Perceived less situational control.
'Harm to self'	Perceived less 'harm to self'

TABLE 22: To show the differences on the appraisal dimensions between the four participants who had 'recovered' from OCD and the OCD group, in the situation of anger. *(NB. Only those differences where all, or three out of the four participants changed in the same direction are given)*

Appraisal Dimension	How it changed in comparison to the mean scores in the OCD group
Unpleasantness	Perceived less unpleasantness.
Personal responsibility	Perceived more personal responsibility
Responsibility of others	Perceived others as having less responsibility
Control of others	Perceived others as having less control
Personal control	Perceived more personal control
Benefit to others	Perceived more benefit to others
Acceptability of actions according to self	Actions more acceptable to self.
Acceptability of actions according to others	Actions more acceptable to others
Acceptability of feelings according to self	Feelings more acceptable to self.
'Harm to others'	Perceived less 'harm to others'

TABLE 23: To show the differences on the appraisal dimensions between the four participants who had 'recovered' from OCD and the OCD group, in the situation of pride. *(NB. Only those differences where all, or three out of the four participants changed in the same direction are given)*

Chapter 4: DISCUSSION

The Purpose of the Study:

The main purpose of this study was to test and explore certain aspects of a variety of psychological theories and perspectives, which have been influential in the understanding of anxiety and OCD. It was also hoped that through doing this the results would be of help in further expanding the understanding OCD, a disorder which is acknowledged to be complex in its make-up.

4.1. The 'Emotional Cognitive Profiles'

This study showed the 'emotional-cognitive profiles' to be different between the three groups in the situations of anxiety and guilt. This supports the theoretical stance that the processing of information relating to the experience of guilt and/or anxiety is important in the maintenance of anxiety and/or OCD. It also supports the argument that to understand OCD one also needs to understand the nature of anxiety and guilt as it is experienced by this client group. However, it is also of interest that no differences were found between the group 'profiles' in the situations of anger and pride.

One way to interpret these findings is that the presence of OCD and/or anxiety is more closely associated with feelings of anxiety and guilt, than it is with anger and pride. In relation to some of the literature this is perhaps not such a surprise and, indeed, provides support for the idea that OCD is probably an anxiety disorder, and speculative support for the notion that OCD is a disorder of both guilt and anxiety e.g. Rosen (1975).

However, some of the literature suggests a specific relationship between anger and OCD e.g. Rachman (1993), which leaves us with the question of why there were no differences in the 'emotional-cognitive profiles' between these groups, in this emotional situation. One

possible reason for this may be found if one looks at the type of anger being experienced: The vignette used in this study described what is unlikely to be considered as anything other than 'justified anger' and the suggestion is that a difference in the three 'profiles' would be observed if this emotion were to be replaced with 'unjustified anger'. A fuller discussion of this point can be read later on in this section.

There were no significant differences between the group 'emotional-cognitive profiles' in the situation of pride, as hypothesised. However, the original hypothesis did not reflect the fact that the two clinical groups would be so much more depressed than the non-clinical group. In hindsight, given the level of depression in the three groups one might also have expected a difference in the 'profiles' in this situation. Incidentally, the fact that no difference was shown, provides some support for the idea that people suffering from depression can relate to positive thoughts, even if in the reality of their own lives they find such thoughts difficult to attend to (Edwards and Dickerson 1987), or, alternatively, the results could be suggesting that the effect of depression is reduced when combined with high levels of anxiety or OCD.

It seems that the nature of 'emotional-cognitive profiles', in the situations of guilt and anxiety at least, are important in the understanding of OCD, but in order to take this understanding further one needs to know more about the nature of these 'profiles' and how they differ between the groups.

4.2. The Role of 'inflated responsibility' and the experience of Guilt

The second hypothesis makes predictions about the differences between the three groups in the appraisal of perceived personal responsibility. The results showed that in the situation of anxiety, both the OCD group and the anxiety group perceived significantly higher levels of

personal responsibility than the non-clinical group. When depression was controlled for in the analysis, the effect was seen to be stable. Consequently, it seems that when the emotion of anxiety is evoked, the perception of "inflated (personal) responsibility" is not a feature specific only to OCD, but is perhaps characteristic of people who are suffering from 'moderate/severe' levels of anxiety. In turn, this suggests that, the basic premise on which Salkovskis's cognitive-behavioural model of OCD is based i.e. 'inflated responsibility' for perceived harm to self and /or others, may also not be specific to OCD alone. In addition, the results support a suggestion, recently made by others e.g. Rachman et al (1995), that the relationship between 'inflated responsibility' and OCD is situation specific, and according to these results, perhaps more specifically, is also emotion-specific.

Therefore, it seems that Salkovskis's cognitive-behavioural model is describing processes central to the experience of anxiety in people suffering from OCD, but that, in itself, it is perhaps not specific enough to explain the whole story. So what is? One suggestion is that the answer lies with the related experience of guilt.

When the experience of guilt was evoked, it was only the OCD group, that perceived more personal responsibility than the non-clinical group. Therefore, if one assumes that the clinical groups have similar levels of depression, as the statistical results indicated, this result offers some support for the idea that guilt is an emotion which has a particular relationship with OCD e.g. Rosen (1975) and, in addition, suggests that "inflated responsibility", when related to feelings of guilt, is a feature specific to this disorder.

However, if one is to assume that the two clinical groups have slightly different levels of depression, as categorisation of the groups according to BDI scores indicated, it becomes more likely that the effect on the appraisal of personal responsibility in the OCD group is

being influenced by the associated levels of depression. Indeed, this latter position is supported, as the difference between the groups, on measures of this appraisal, disappeared when depression was controlled for in the analysis. One is therefore more likely to argue that "inflated (personal) responsibility" , in situations of guilt, is a feature specific to low mood, rather being specific to OCD and/or anxiety alone i.e. low mood being assumed to increase the level of perceived personal responsibility for negative outcome.

The latter explanation would fit with the psychoanalytic theory of depression, which conceptualises depression as internalised guilt, e.g. Abramson and Freud (1911/17). It would also fit with the learned helplessness theory of depression where the individual attributes positive outcome to external factors and negative outcomes to internal factors e.g. (Abramson et al 1978), but where does this leave the role of responsibility and guilt in the understanding of OCD? Is it merely a combination of appraisals associated with varying levels of anxiety and depression which causes this disorder to develop, or is there something else, something more specific? Intuition suggests the latter, but in an attempt to answer this question further, the discussion will now be turned to the results of hypothesis four; a part of which examined the group differences in the acceptability of feelings of guilt.

Hypothesis four predicted that people with OCD would find feelings of guilt less acceptable than the other two groups, but the results of this study did not support this difference. Why might that be? An obvious explanation is that the feeling of guilt is not any less acceptable for this client group, which, in turn, would suggest that the psychodynamic formulation that OC symptoms are a result of the desire to avoid feelings of guilt are also not supported. A second explanation is the reduced effect of the small sample size. However, there are two other possibilities, which relate back to the nature of the emotion being experienced. Firstly, the emotional descriptions associated with the guilt vignette,

suggest that in addition to guilt, it also evoked feelings of anxiety. So, it may be the latter feelings which are influencing the ratings of acceptability: given the nature of the story, it would not be a surprise if feelings of anxiety were appraised as very acceptable. Secondly, the vignette described a certain type of guilt experience i.e. the experience of guilt about an event which has already happened. In other words the vignette describes 'guilt for the present', with very little 'anticipated guilt for the future'. A suggestion here is that the acceptability of guilt would have been less had it been in connection with an event which had not yet occurred, but only existed in thought and in the future; in other words, if the level of anticipated guilt had been greater. This idea would make a link with the experience of intrusive thoughts, which are so often a dominant feature of OCD, the thought providing the context of anticipated guilt. In this way 'neutralisation' can then be conceptualised as a response to the 'unbearable anxiety' related to anticipated negative outcome, combined with the possibility of feeling 'unbearably guilty' for that outcome. But how is this linked to the appraisal of "inflated responsibility"?

As was highlighted in the introduction, it is not a great conceptual leap to move from talking about guilt to talking about responsibility. The two seem intuitively and inherently linked. However, as all interesting relationships the link is not as simple as all that! Guilt was described earlier as occurring when one violates one's own 'internal rules' or personal standards. Therefore, if one has not violated one's 'internal rules', it becomes possible to feel responsible for a negative outcome, without feeling guilty. Based on these definitions, responsibility, alone, seems to be a necessary, but not sufficient feature of guilt, with guilt being a possible but not automatic reaction to the appraisal of responsibility. If one takes the position that guilt is, indeed, a feature specific to OCD, this leads to the suggestion that people suffering with OCD have stricter, more easily violated 'internal rules', which are somehow associated with being more responsible for 'negative outcomes', than people

who are not suffering from this disorder: explaining why 'inflated responsibility' was observed in this group, but not the anxiety group in the situation of guilt. At this point it still leaves open the questions, how is this different from depression and how do these 'internal rules' develop?

Intrusive thoughts have been shown to be part of 'normal' cognitive experience, but what is becoming more evident is that people with OCD feel more responsible for both the content of the thought and the thought itself, than people who are not suffering with this disorder e.g. Freeston et al (1992), Clark (1992). One interpretation of this is that people with OCD feel guilty about the occurrence of thought, associated with anxiety about what having such thoughts means, but perhaps more importantly they believe the negative content of the thought as being more likely to come true and that they will be responsible for it when it does (in other words the likelihood of a negative outcome, for which they are responsible is greater in this group than a non-OCD client group). A suggestion here is that this results in the experience of anxiety (from the 'threat' of a negative outcome, and the increased likelihood this will happen) plus anxiety related to 'anticipated guilt' (from the belief that one is responsible for the negative outcome). This, in turn leads to 'the need to do something about it' and the resulting OC symptoms, i.e. there is an increase in the present anxiety and anticipated guilt if one does not do something to prevent the perceived negative outcome. In conclusion, this formulation brings many theories together; those of 'inflated responsibility' e.g. Salkovskis (1985/89), those of OCD being symptomatic of a desire to avoid guilt e.g. Rosen (1975) and those of 'exaggerated threat appraisals' & perceived increase in the probability of a negative outcome e.g. Carr (1974). It also maintains the link with anxiety, which is so obviously present in the presentation of this disorder. The appraisals of responsibility make this different from a formulation of depression e.g. Salkovskis (1985/89), as does the idea that the guilt is related to the future;

Guilt and responsibility associated with depression is often linked to the past e.g. van Oppen & Arntz (1994).

So, to the question of how the 'internal rules' related to responsibility develop and, why the feelings of anxiety and guilt reach such a point where the OC symptoms, severely distressing in their own right, occur as a way of dealing with this psychological position.

From a psychodynamic perspective a suggestion might be that 'anticipated guilt' is linked to unresolved feelings of guilt and/or anger. If this were true one might expect psychotherapeutic intervention, alone, to be more effective than the evidence seems to suggest e.g. Jenike (1990). However, it seems to me that the answer to questions such as these will be better understood if one combines behavioural, cognitive *and* psychodynamic perspectives/treatments, rather than trying to concentrate on proving the worth of only one.

So, with this point in mind, where do the anxiety, guilt and beliefs about 'responsibility' come from? This is where the discussion will be turned to the results relating to hypothesis three. This hypothesis looked at the role of perceived control.

4.3. Control: Is it linked to Responsibility and Guilt, and if so how?

The third hypothesis predicted that the two clinical groups would perceive less personal control in the situations of anxiety and that the OCD group would perceive less personal control in the situation of guilt, predictions which were not, in fact, supported. These results, therefore, do not support the theory that appraisals of perceived control are linked to the presence of anxiety disorder or OCD. In many ways this is a somewhat surprising result, as much of the literature suggests that a loss of control is associated with anxiety and OCD e.g. Chambless & Gracey (1989).

However, one explanation for this lack of difference might be that it is not the actual appraisal of control which is important, but perhaps the meaning of this appraisal. So, for example, compared to people from a non-clinical population, people suffering from anxiety or OCD, may perceive the same level of control in any given situation, but their secondary appraisals may then result in them feeling more or less at risk, or, more or less responsible.

An alternative explanation is that the results reflect the fact that in this specific type of emotional situation, the appraisal of control actually does not differ between the three groups. This again leads one to look more specifically at the nature of the anxiety and guilt being experienced:

The anxiety vignette looked specifically at performance related anxiety and so perhaps the results on this appraisal dimension would be different if one considered a different form of anxiety e.g. non-performance related anxiety. Indeed, performance-related anxiety may be viewed as the anticipation of a negative outcome, or uncertainty about outcome of an event which actually is in one's own control, whereas non-performance related anxiety e.g. anxiety about being alone in the home can being be more easily linked to a feelings of not being in control. An interesting avenue for future research?

With respect to guilt, different forms of guilt are not so obvious. One form of specific guilt may be that which is linked to omission bias e.g. Salkovkis et al (1995) but this vignette was constructed to include this by using a situation where the person did not do something, as opposed to having done something. This brings us back to the idea of 'anticipated guilt' . It has already been suggested that the guilt vignette did not focus on guilt of the future i.e. the "what ifs..." and "I'd feel really awful ifs..." in relation to an event which has not yet happened. In this vignette the accident had already happened. So, again a suggestion is that

the three groups would have differed in their perception of personal control if greater levels of 'anticipated guilt' had been present. More specifically, one would hypothesise that the OCD group would perceive significantly more personal responsibility when 'anticipated guilt' is experienced. The results of hypothesis seven also support the idea of a specific type of guilt being important in the aetiology of OCD. These results showed that the perceived likelihood of the occurrence of symptoms was correlated with situations of guilt in general, but not with the specific situation of guilt used in this study.

At this point attention is turned to the appraisal dimensions of perceived control of others and perceived situational control. No specific hypotheses were made in relation to these appraisals, but the pattern of raw scores on these measures suggest that compared to the other two groups, the OCD group perceived greater control of others, in the situation of anxiety, and greater situational control in the situation of guilt.

Although the differences in scores, between the groups, did not reach statistical significance, this observation suggests that people suffering with OCD associate guilt with being responsible in a situation that is out of anyone's control and anxiety with being responsible in a situation that is controlled by others. It is here that control can be linked to the appraisals of responsibility and guilt, and in so doing be used in an attempt to answer the earlier questions about the origins of the anxiety, the guilt and the beliefs relating to personal responsibility.

As a child, a time when the situation is inherently in the control of others, the suggestion is that children who later suffer with OCD, experience life in such a way that they are made to feel very responsible, guilty and anxious for negative outcomes which are totally out of their control. In this way they develop a learned sense of responsibility and guilt for negative

outcomes (and possibly all outcomes), which if combined with learned anxiety for making sure things 'turn out OK', may then form the basis for the development of "inflated responsibility", perfectionism and the need to avoid negative outcomes. In comparison with other clinical groups, one would therefore speculate that people suffering from other emotional disorders would not learn the same combination of associations. Returning to the psychodynamic idea, the 'unresolved guilt and/or anger' can then be conceptualised as the unconscious guilt associated with 'never getting it right' in the eyes of important others and/or the anger for being asked to perform the impossible tasks of 'getting it right all the time'.

The two process theory of control (Rothbaum et al 1982) can also be applied to this formulation. Rothbaum suggests that if one finds one cannot change the world to fit oneself, instead of relinquishing control, one tries to change oneself to fit the world. Using this model, it could be argued that a person with OCD is stuck in the first stage of still trying to change the world to fit their beliefs e.g. by using compulsive behaviours and rituals as a way of trying to control outcome. The suggestion then follows that the core belief that one is responsible for negative outcomes, however out of one's control they might be in reality, is playing a part in maintaining the position that one 'ought to be able to change the world'. In this way s person with OCD might also be thought of as trying to fit themselves into an 'unrealistic/imagined world' of being able to control all outcomes.

However, another pause for reflection again brings to mind questions about the relationship between OCD and depression. For example, is the high incidence of depression associated with OCD linked to the 'guilt' involved for being responsible for negative outcomes in the past? This takes us back to one of the earlier questions, which asked whether or not OCD is somehow made up of a combination of features of anxiety and features of depression. The

intuitive answer and the above discussion suggest that the relationship between these emotional disorders is not as simple as that, but the results of this study seem to suggest it as a possibility. The following discussion focuses on the relationship between depression and OCD:

4.4.Depression, OCD and anxiety: the relationship between them.

Depression has been associated with OCD by many e.g. Turner and Biedel (1992), has been found to increase uncontrollability of negative thoughts e.g. Clark (1992) and in a service evaluation carried out by the present author, was also found to reduce following treatment of OCD in a group of five people (MacCallam 1995).

Relating back to this study, results of hypothesis two showed a significant difference between the three groups on the appraisal of personal responsibility in the situation of pride. Given the levels of depression in the three groups, one would probably have predicted this difference to lie between the OCD group and the non-clinical group. Interestingly, the difference lay between the two clinical groups. One possible explanation for this is that although slightly more depressed than the non-clinical group, the anxiety group were the most able to relate to thoughts and feelings of pride (even if in the reality of their own lives they are not so able to attend them). This fits with the common clinical perception of people prone to anxiety, that they are people who are often afraid of not meeting the standards set by themselves and/or others, but that if they do meet them are often able to acknowledge and 'celebrate' that achievement in some way (even if this only in the short-term and is not assimilated into the self concept), but I digress...!

It is also true, as was the case with the anxiety vignette, that the pride vignette focused on performance-related pride, and so again different results may be achieved if this were to be replaced with non-performance related pride.

But how do these results inform our understanding of OCD and the relationship of OCD and depression? The fact that OCD can occur in the absence of depression and the fact that depression can either increase or decrease OC symptoms, e.g. Turner and Biedel (1992) suggests this is a complex area for discussion. Overall, the results of hypothesis two suggested that people with OCD and depression perceive more responsibility, than people with anxiety and depression and people from a non-clinical population in the situations of anxiety and guilt and less in the situation of pride. As described earlier one explanation for this is that this effect is mainly due to the associated levels of depression. One way to test the 'truth' of this explanation would be to repeat this study, either with a comparison group of people suffering with severe depression, in the absence of OCD, and/or a group of people presenting with OCD, in the absence of high levels of depression. In this way it would help ascertain whether the 'inflated' and 'deflated' responsibility, in response to the emotions of guilt and pride, is a feature specific to OCD or whether, indeed, it is more closely associated with low mood.

The relationship between OCD, anxiety and depression is again raised if one considers the results pertaining to hypothesis six. This hypothesis looked at the role of perceived harm to self in anxiety and OCD:

As predicted it was found that both clinical groups perceived significantly higher levels of harm to self than the non-clinical group in situations of anxiety. This same effect was also found to be the case in situations of guilt. As with the appraisal of personal responsibility,

when depression was controlled for, the effect was stable in the situation of anxiety, but disappeared in the situation of guilt.

These results support the theory that exaggerated appraisals of harm/threat to self in situations of anxiety is a feature of anxiety e.g. Clark (1989) and, in addition, suggest that this appraisal is exaggerated in the situation of guilt, for these two clinical groups. However, what these results do not support is the idea that the appraisal of self harm is specifically related to guilt and/or the responsibility associated with guilt, in people suffering with OCD. In addition, the influence of depression again suggests that, in the situation of guilt, this appraisal is more closely associated with low mood, than with anxiety or OCD alone.

The fact that there were differences in two of the four emotional situations, on the appraisal dimension of perceived self harm, suggests that it is an appraisal which is particularly significant in the thinking of these two clients groups. However, the fact that there were no differences on this appraisal in the situation of anger continues to support the position that the appraisals, important in the aetiology of these emotional disorders, are situation and/or emotion specific, rather than being a general feature of anxious thinking.

But how does this all of this relate to our understanding of relationship between OCD, anxiety and depression? It seems that in the situation of anxiety, perceived harm to self and perceived personal responsibility are significantly influenced by levels of anxiety and in the situation of guilt, by levels of depression. Therefore it is arguable that, overall, the differences between the two clinical groups on these two appraisal dimensions, are dependant on the affect of depression. In itself this again raises the questions, whether or not OCD is somehow a combination of the two other emotional disorders i.e. anxiety and

depression?, and whether or not the "inflated responsibility" thought to be associated with OCD (Salkovskis 1985/89) is actually due to the differential levels of depression in this group?

The previous discussion went some way to arguing that the relationship between OCD, anxiety and depression is not that simple, but we will now look to the role of anger to continue this discussion further:

4.5.The role of anger in OCD; the role of anger in the 'recovery' from OCD

Hypothesis four predicted that the OCD group would find feelings of anger to be less acceptable in this situation, than the other two groups, which, in fact was not found to be the case. Consequently, this does not support the idea that the experience of this emotion is less acceptable for people suffering with OCD. This, in turn, is not supportive of the theory that OC symptoms are an attempt to deal with feelings of anger, as suggested by others e.g. Ryz (1993) and as described earlier in the discussion. However, this result brings us to a point where we will again look at the importance of the specific nature of the emotional experience of anger:

In this study the emotional vignette described anger which was unlikely to be seen as anything other than 'justified' and the proposal is that anger may be perceived as less acceptable if it is interpreted as being more 'unjustified'. An example of this might be anger at one's parents, when the parents are very clear about the fact that they are trying to help you.

At this point it also becomes relevant to refer to the results of the four participants who were 'recovered' from OCD. What is interesting in these individuals is that when the

appraisal scores are compared to those of the OCD group, the most consistent changes i.e. changes on the measure of any given appraisal which moved in the same direction for all four participants, were noted to be in the situation of anger. In summary, the people 'recovered' from OCD perceived the situation of anger to be less pleasant, perceived others having more of the responsibility and control, oneself having less control, there being less situational control and less perceived harm to self. At first glance one might assume that this is a more realistic perception of legitimate anger. However, when one compares these scores to the mean scores in the non-clinical group one finds that the changes which have moved the 'recovered' individuals closer to the non-clinical groups are perceived pleasure, perceived responsibility of others and perceived harm to self.

Incidentally, the fact that perceived harm to self is one of the appraisals to see a positive change in those 'recovered' from OCD supports the threat/appraisal theory of anxiety/OCD. However, four clients is a small number of participants on which to base any generalisations, and it still begs the question, why were these changes most consistently observed in the situation of anger?

The four participants in this group presented with a variety of OC symptoms and so this question cannot be answered by attributing the changes to 'recovery' from a certain type of symptom. It is also true that the results fit with the clinical observation that people recovered from OCD, tend to improve in assertiveness and in their ability to express anger e.g. Rachman (1993), but why then was no difference found between the OCD and non-clinical groups in appraisals in the situation of anger in the main study? One obvious reason for this lack of effect is that the differences in appraisals, in the situation of anger, are not as marked as in the situations of guilt and anxiety , and so are not apparent with the small sample sizes used in this study. However, an alternative explanation is that 'recovery' from

OCD is associated with increased ability to deal with 'unjustified' anger, but that this shift then generalises to changes in the appraisal of 'justifiable anger'. It is also possible to link this explanation back to the formulation described earlier. The first link is through the idea that a person with OCD may be harbouring 'unresolved anger'. The second link is that in the same way that there is a learned association between guilt, responsibility , anxiety and negative outcome, there is also an absence of learning about how to express anger and an 'internalised rule' that it is 'harmful/bad' to express anger inappropriately (particularly toward important others).

At this point a summary of the proposed formulation as it has developed throughout the discussion will be given:

4.6. The Proposed Formulation of OCD:

Early learned associations, which become internalised rules and/or forces

1.Responsibility, associated with strong feelings of guilt, for negative outcomes (including outcome which are, in reality totally out of that person's control)

2.Associated with (1), the belief that one is powerful enough, and should, be able to control and influence outcome (related to the 'pivotal power' of responsibility)

3.. Perceived self harm, associated with strong feelings of anxiety, for negative outcomes

4.Learned inability to express anger and belief that it is 'harmful' to do so.

Anxiety and Depression

The anxiety comes from the threat of perceived negative outcomes, particularly when the belief that the negative outcome will occur is high. The depression comes from the failure of effortful attempts to always control outcome (effortful attempts to control all outcomes will inevitably fail because it is an impossible task; the world and others can be unpredictable places, but the person with OCD finds it difficult to incorporate this knowledge into their belief system).

Leads to:

1.Increased frequency of intrusive thoughts, through anxiety

2. Increased uncontrollability of intrusive thoughts, through depression

Intrusive thoughts become more pronounced

(may disappear from awareness once a learned chain of responses has become 'automatic')
Beliefs about responsibility/'pivotal responsibility' and thought-action fusion are triggered or further triggered at this point.

1.Further increase in the perceived likelihood of a negative outcome

2. Further increase in anxiety to a point where it is 'unbearable'

3.Further increase in' anticipated guilt' to a point where it is 'unbearable'

4.Further increase in the need to 'do something about it', to the point where it becomes impossible to resist.(related to beliefs of responsibility, combined with desire to avoid feelings of guilt and anxiety).

OBSESSIVE COMPULSIVE SYMPTOMS

In the above formulation, there would be a feedback loop from obsessive-compulsive symptoms to anxiety and depression. This is based on the theories that a) compulsions and/or obsessive rituals serve to maintain anxiety and b) that the failure of effortful strategies can result in depression. One of the things this formulation does not address is why the symptoms of OCD usually tend to be focused in specific areas e.g. checking only certain things. An avenue of exploration I will leave as a recommendation for future research.

The discussion will now move on to explore the results of hypothesis five:

4.7. The 'acceptability' of actions.

Hypothesis five stated that in the situation of guilt, the OCD group would perceive their actions as less acceptable than the other two groups. In the event this prediction was not supported by the results and indeed the significant difference was found to lie between the anxiety group and the other two groups; the anxiety group perceived their actions as more acceptable in this situation. This hypothesis was based on evidence such as that of Purdon and Clark (1992) who proposed that the belief that a thought could lead to unacceptable behaviour is a predictor of OCD. The non-significant difference therefore leads one to question whether it is not the acceptability of the behaviour itself, but what that means for the person which is the more important factor. For example, a behaviour may be seen as equally unacceptable, but provoke a greater sense of 'harm to self' for someone suffering from OCD than in someone who is not suffering with this disorder i.e. there is a greater violation of 'internal rules'.

Theoretical explanations for why the anxiety group have a significantly different perception of this appraisal are unclear, which leads one to question whether there were differences in

interpretation of this particular appraisal, between the groups.(see section 5.2. for further reflection on this point).

4.8. The relationship between personal responsibility, 'harm to self' and symptoms

For the OCD group there was a correlation between the perceived likelihood of the occurrence of symptoms and the appraisals of perceived harm to self and perceived personal responsibility in the situation of anxiety and perceived personal responsibility in the situation of guilt. This result is as predicted and can be construed as offering support for Salkovskis's idea that OC symptoms are linked to both these appraisals. These results go one step further in suggesting that the combination of these two appraisals is only significant to the experience of guilt, and is not a general feature of thinking in OCD, which can be applied to all emotional experiences. Again this highlights guilt, and its associated appraisals of responsibility as an emotion central to experience of OCD.

However, there was not the predicted correlation between these appraisals and perceived likelihood of symptom occurrence in the anxiety group. Theoretically, the reason for this is not obviously apparent, except for the speculation that people with OCD are more consciously aware of the situations in which OC symptoms are likely to be experienced i.e. people suffering from OCD may associate OC symptoms with feelings of anxiety and guilt, which in turn is associated with perhaps the less conscious appraisal of 'exaggerated threat' appraisals and 'inflated responsibility'. One therefore wonders whether the association of symptoms with emotions was a less obvious association for this group of people suffering with anxiety only. However, with results based on only a limited amount of self-reported data this area constitutes a recommended area for future research.

4.9. OCD: a narrow view of oneself?

This is added merely to cover one other observation of the data:

The pattern of raw scores on the appraisal of 'other responsibility' showed that the OCD group attributed less responsibility to others than the other two groups, in the situation of guilt. Although the statistical differences between the scores were not significant this suggests that the gap between level of responsibility attributed to self and level of responsibility attributed to others is greatest in the OCD group. This is not so apparent in the other emotional situations. This kind of observation would fit with the theoretical position that people suffering with OCD have a more extreme view of themselves e.g. Millar (1980), but suggests that, on this appraisal, it is only in relation to situations evoking guilt; further support for a specific role of guilt, and its associated appraisals of responsibility in OCD

4.10. Some Conclusions? Where does this leave us?

In conclusion, it seems that "inflated responsibility" is not a feature specific only to OCD, people suffering from other anxiety disorders are also found to make such an appraisal. However, what can be tentatively suggested from these results is that the perception of "inflated responsibility" is a more wide spread feature of thinking in OCD, associated with the emotion of anxiety, but also with the emotion of guilt. In other words, a suggestion that OCD affects a greater part of one's emotional life than other anxiety disorders might do. One interpretation of this is that, clinically, people with OCD are more affected by depression, an emotional disorder where the impact and influence of the feelings of guilt is reasonably well documented and accepted e.g. Abramson and Freud (1911/17). However, another more complex formulation has been offered which combines anxiety, depression and OCD in one model, through a number of different processes involving learned anxiety, responsibility and guilt for a negative outcome, where that outcome is, in reality, out of one's control. (see section 4.6., page 105).

The links made in the formulation are similar to those made by Salkovskis in his cognitive-behavioural model, but in this case guilt is more clearly highlighted as a specific factor, and is considered as more than just 'feeling responsible' for negative outcome. Although not clearly illustrated by the results of this study a suggestion is that 'the guilt' also has to do with 'not being good enough' and not 'living up to standards'. The proposed formulation also suggests a possible route via which the belief that one is responsible for outcome might develop.

Overall, this research has focused on a number of psychological theories and perspectives. The results have not supported an attempt to provide evidence for one particular theory, as opposed to any other, but what they have supported, to some extent, is the proposal that these theories may need to be viewed together to inform our understanding of OCD as a whole experience.

Finally, the results and discussion of this study seem to lead to three areas, in particular, which I would like to highlight as warranting further investigation. The first two are closely linked, the first being the need to know more about the nature and role of the experience of guilt in OCD and the second being the need to explore what it means to someone with OCD to feel 'responsible'. The third area is the need to explore the relationship between OCD and depression still further.

Chapter 5: Suggested Improvements and Future Research

In this section some of the limitations of this research study will be described, along with suggestions for how the study could have been improved and ideas for future research. The section will be split into three parts. The first part will concentrate on limitations of the study as a whole, including discussion relating to the nature of the participants and the use of the standard questionnaires, the second part will include a critical review of the measure developed by the researcher and the third part will summarise some ideas for future research.

5.1. General Methodological Issues, the Nature of Participant Inclusion and the use of Standard questionnaires

The first limitation, one which is probably mentioned by many time-limited studies, is the fact that only small numbers of participants were used i.e. ten in each group. Such small numbers limit the reliability of the study, but, on the other hand, probably means that the significant results which were obtained reflect fairly powerful effects.

The difficulties in identifying a sufficient number of people, particularly people suffering from OCD were anticipated, and from the outset an attempt was made to lessen this difficulty by approaching two Health Authorities, rather than the more usual one. Nevertheless, despite this attempt to overcome this problem , a larger sample size remains as a recommendation which would improve this study.

A second limitation is the small size of the pilot study and the fact that all the participants in this study were people suffering from OCD. The need for a larger, more comprehensive pilot study was recognised, but remains a recommendation which would improve a repeat of this study. One further improvement would be, either to develop a procedure which

produced a "better match" of participants and/or to carry out more detailed analysis on the individual differences or within-group differences in the study e.g. differences related to gender. However, a larger clinical population and sample size would probably be necessary to achieve these recommendations satisfactorily.

At this point it also seems relevant to mention the reasons for including a 'phobic anxiety' comparison group. Phobic anxiety was initially chosen as a comparable disorder because 'phobia' is classified as a specific anxiety disorder, in much the same way as OCD. However, the methodology did not include a formal assessment of whether or not the people in the clinical groups met the DSM IV criteria for OCD or phobic anxiety; differentiation of the groups relied on measurement of anxiety using the Beck Anxiety Inventory. The method used met the needs of this study, but alternative measures which would have allowed a more specific assessment of phobic symptoms, along with symptoms of OCD are the SCL 90 and the Hopkins Symptoms Checklist (Derogatis et al 1972).

It is also true to say that in both groups several type of OCD and /or anxiety are present and as the study developed it became apparent that the score on the BAI, together with scores on the PI, became the main assessment tools used to discriminate for participant inclusion in the two clinical groups (rather than presence or absence of more specific clinical features or categorisation according to strict DSM IV criteria). Although not perfect, a distinction based on these scales was considered to be appropriate for investigating the differences in appraisals between the three chosen groups. However, the main implication of these points is that a) inclusion in the groups may not have been as well controlled, nor probably as narrow, as it might have been and b) the results cannot be applied to one type of symptom or disorder only, but can only be reliably interpreted in relation to group discrimination, as measured by these standardised measures.

One slight note of caution in relation to this is that the Padua Inventory does not have norms which are based in the British population. This is not uncommon for many of the standardised measures which are used in clinical practice e.g. Jacobson (1988), but does means that one cannot be absolutely certain that the chosen cut-off score is the score which delineates the point of differentiation between clinical and non-clinical symptomatology for this population. This does not necessarily affect the results of the study since the groups were significantly different on this measure, but is a note of caution in terms of generalising the OCD group results to a British clinical population.

A final point relating to the nature of the participants comes from observation that there is considerable variance in scores on the standardised measures, particularly in the OCD group. The statistical analysis adopts the group mean scores, but this obviously misses a lot of valuable information relating to individual differences. Recommendations to overcome this would either be to ensure a sample where less variance is apparent , or to have achieved a larger sample, where individual differences could have been more easily analysed. A third possibility would be to adopt a qualitative methodology, where such individual and social differences are more readily acknowledged e.g. Sherrard (1997).

A final, general comment is that the research design encompassed a wide range of psychological and theoretical perspectives, using a wide range of cognitive appraisals and a range of emotional experiences. This has certain advantages such as offering a broad picture of a complex problem, allows comparison of appraisals in a variety of specific emotional situations, rather than examining the nature of appraisals in response to only one emotional experience and promotes some speculation as to whether or not certain appraisals are general or specific features of thinking for people suffering with anxiety or OCD. However, it has the disadvantage that it probably lacks the depth and specificity to confirm,

or not, any one given theory or model. An alternative approach would have been to concentrate on only one theory, measuring only a few appraisal dimensions e.g. testing Salkovskis's cognitive-behavioural model more specifically, by measuring only the appraisal dimensions of personal responsibility and harm to self.

5.2. Review of the Appraisal Questionnaire

Appraisal Questionnaire:

The development of this questionnaire was based on work of other authors e.g. Manstead & Tetlock (1989), but used analogue, rather than Likert scales to provide increased sensitivity and responsiveness of the information gained e.g. Pfennings et al (1995). However, the use of the analogue scale measurement presents certain limitations in itself. Firstly, it requires the participant "to conceive of the line as a representation of personal experience of an abstract concept". (Wewers and Lowe 1990 p.233), is totally dependent on the participant's interpretation of the maximal value (Wewers and Lowe 1990) and, in the absence of precise definitions, it necessitates individual interpretation of the concepts being measured, with no check on which dimension of a construct is being considered by the participant. The reason for mentioning these points is that it raises questions about the reliability, validity and comparability of the data, which, as with any study, need to be borne in mind in the interpretation of the results.

In relation to this, the terms used to label the analogue scales were not operationally defined, mainly because it was believed that, overall, the terms used could be considered as having fairly universal meanings. In support of this position is the quote that "The majority of studies that manipulate control provide no formal definition of the concept, but rely on the reader's common sense understanding of the word..." Thompson (1981). Nevertheless, even though the lack of precise definitions is apparently not unique to this

study, the researcher would still recommend their introduction as an improvement. The same recommendation could also be made in relation to other terms used in the questionnaire e.g. use of the term "others".

A final point about the analogue scales is that the poles of each appraisal dimension were not always labelled with precisely the same terminology e.g. very and totally were used interchangeably, depending on the appraisal. This necessitates caution in relation to the results of hypothesis one and a recommended improvement to this study is a standardisation of the labelling of the poles.

However, having pointed out the disadvantages of the use of the analogue scale, the fact that each emotional situation produced a different type of profile, the fact that there were highly significant differences between appraisal dimensions (as one would expect from the review of the cognition-emotion literature), the fact that the significant results fitted pre-existing theories in the OCD literature, despite there only being a small sample size, and the fact that the variance on each dimension was, in the main, equal in each of the groups suggests that this was a reasonably successful measure and was successful, overall, in tapping into the cognitive-emotional appraisals in a variety of emotional situations. However, there are some further points about the questionnaire which need to be discussed and raised as potential improvements if a similar measure were to be used in the future.

As others have done, e.g. Mauro et al (1992) only one measure of each dependent variable/appraisal dimension was taken in each emotional situation. This means that the response variation is likely to be smaller for each appraisal, but that a broader understanding of each appraisal term, e.g. the term "responsibility", is less likely to be captured. It also means that if this one question is misunderstood by anyone then that measure becomes less

reliable and less valid for that particular participant. With more than one question relating to the same appraisal dimension, then one misunderstood question is likely to be offset by the responses on the others and/or allow measurement of different aspects of the same concept. The introduction of several questions relating to one concept is recommended as one way of improving this study.

Additional considerations relating to this questionnaire are firstly that the questions were phrased in a way that asked the reader to consider the situation as a whole. This was based on the assumption that this would most closely reflect 'real life' experience, but does not allow for a more detailed analysis of how appraisal and emotions might change minute to minute or which aspects of the story were most salient to which individuals. The latter might be an area worthy of consideration in future research. In fact, some researchers have already begun to question what aspects of any given experience are most important to individuals suffering from different emotional disorders e.g. Freeston et al (1996) suggest the importance attached to thoughts is the most salient aspect in OCD.

The questionnaire and the vignette stories could also be added to or changed to incorporate some of the other features which have been identified as important in the aetiology of OCD and anxiety. For example, to specifically include items relating to the experience of and response to intrusive thoughts or items relating to the perceived ability to cope (a secondary appraisal associated with the experience of emotion, particularly anxiety).

The construction of this questionnaire was based on previous research, but, a final point, as mentioned in the 'Methods' section, is a recommendation that the psychometric properties of this questionnaire be investigated more thoroughly and effectively with tests of reliability and validity. This was a task not possible within the constraints of this project.

5.3. FUTURE RESEARCH

As stated before three obvious areas for future research are to understand the nature of guilt more fully, to explore further the relationship between depression and OCD and to examine what it means for someone suffering with OCD to 'be responsible'. However, there are a number of other avenues for future research, which also come to mind at this point:

One suggestion for future research, is to look more closely at the process of making appraisals, as well as examining what the final appraisals actually are. This could include an investigation of the situational triggers associated with certain appraisals as well as exploration of nature and process of the cognitive processing itself. Smith et al (1993) also point out that knowing about appraisals can help us infer things about emotions and vice versa, but what we still need to investigate further is where from, and how, these emotional-appraisals develop. In essence this highlights the need to explore meaning, rather than symptoms in the absence of meaning. From a cognitive perspective this would involve detailed exploration of core beliefs.

In this study the focus was on very general appraisals e.g. looking at responsibility as one concept. A second recommendation for future research is that the focus be made more specific. For example, focusing only on the aspects of responsibility which are thought to be most significant in the aetiology of OCD i.e. thought-action fusion as an aspect of responsibility e.g. Rachman (1985); Rachman et al (1995) and pivotal responsibility e.g. Rheaume et al (1995), focusing only on one theoretical perspective e.g. the cognitive - behavioural model of OCD, or focusing only on one symptom e.g. the nature of intrusive thoughts. It is also true that this study only looked at responsibility for and control of

action/behaviour and in addition future research should perhaps continue to widen this focus to responsibility and control of thought or mental processes.

Another suggestion, apparent from the previous discussion, is the idea of looking at the affect of less 'pure' and/ or more ambiguous emotions, in order to ascertain whether the specific nature of the emotional experience is, indeed, important in the aetiology of emotional disorders e.g. anticipatory guilt or anger which is perceived as unjustified.

Much of the recent research into OCD has focused on the experience and responses to cognitive intrusions e.g. Freeston et al (1996), Clark and Purdon (1993), Rachman (1994) Intrusive cognitive experiences, in this case memories, have also been associated with severity of depression (Kuyken and Brewin 1994); another way in which these two disorders could possibly be linked. So, a comparison of the nature of, and responses to cognitive experience in both these disorders seems to be obvious choice for future research.

Finally, as a parting comment I would like to quote Lewis (1936) who said that "obsessional problems cover so wide a field that it is difficult to examine them without examining the nature of man". A fascinating, but challenging journey for psychological theory, understanding and practice....

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CONTENTS OF APPENDICES

ITEM 1

DATE _____

is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each
om during the PAST WEEK, INCLUDING TODAY, by placing an X in the corresponding space in the column next to each symptom.

	NOT AT ALL	MILDLY It did not bother me much.	MODERATELY It was very unpleasant but I could stand it.	SEVERELY I could barely stand it.
1. Numbness or tingling.				
2. Feeling hot.				
3. Wobbliness in legs.				
4. Unable to relax.				
5. Fear of the worst happening.				
6. Dizzy or lightheaded.				
7. Heart pounding or racing.				
8. Unsteady.				
9. Terrified.				
10. Nervous.				
11. Feelings of choking.				
12. Hands trembling.				
13. Shaky.				
14. Fear of losing control.				
15. Difficulty breathing.				
16. Fear of dying.				
17. Scared.				
18. Indigestion or discomfort in abdomen.				
19. Faint.				
20. Face flushed.				
21. Sweating (not due to heat).				

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ITEM 2

BDI

Date: _____

ame: _____ Marital Status: _____ Age: _____ Sex: _____

ccupation: _____ Education: _____

his questionnaire consists of 21 groups of statements. After reading each group of statements carefully, rcle the number (0, 1, 2 or 3) next to the one statement in each group which **best** describes the way you ve been feeling the **past week, including today.** If several statements within a group seem to apply equally ell, circle each one. **Be sure to read all the statements in each group before making your choice.**

1	0	I do not feel sad.
	1	I feel sad.
	2	I am sad all the time and I can't snap out of it.
	3	I am so sad or unhappy that I can't stand it.
2	0	I am not particularly discouraged about the future.
	1	I feel discouraged about the future.
	2	I feel I have nothing to look forward to.
	3	I feel that the future is hopeless and that things cannot improve.
3	0	I do not feel like a failure.
	1	I feel I have failed more than the average person.
	2	As I look back on my life, all I can see is a lot of failures.
	3	I feel I am a complete failure as a person.
4	0	I get as much satisfaction out of things as I used to.
	1	I don't enjoy things the way I used to.
	2	I don't get real satisfaction out of anything anymore.
	3	I am dissatisfied or bored with everything.
5	0	I don't feel particularly guilty.
	1	I feel guilty a good part of the time.
	2	I feel quite guilty most of the time.
	3	I feel guilty all of the time.
6	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished.
	3	I feel I am being punished.
7	0	I don't feel disappointed in myself.
	1	I am disappointed in myself.
	2	I am disgusted with myself.
	3	I hate myself.
8	0	I don't feel I am any worse than anybody else.
	1	I am critical of myself for my weaknesses or mistakes.
	2	I blame myself all the time for my faults.
	3	I blame myself for everything bad that happens.
9	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself, but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.
10	0	I don't cry any more than usual.
	1	I cry more now than I used to.
	2	I cry all the time now.
	3	I used to be able to cry, but now I can't cry even though I want to.
11	0	I am no more irritated now than I ever am.
	1	I get annoyed or irritated more easily than I used to.
	2	I feel irritated all the time now.
	3	I don't get irritated at all by the things that used to irritate me.
12	0	I have not lost interest in other people.
	1	I am less interested in other people than I used to be.
	2	I have lost most of my interest in other people.
	3	I have lost all of my interest in other people.
13	0	I make decisions about as well as I ever could.
	1	I put off making decisions more than I used to.
	2	I have greater difficulty in making decisions than before.
	3	I can't make decisions at all anymore.

_____ Subtotal Page 1

CONTINUED ON BACK

THE PSYCHOLOGICAL CORPORATION
HARCOURT BRACE JOVANOVICH, INC.

9-018359

14

0 I don't feel I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.

15

0 I can work about as well as before.
1 It takes an extra effort to get started at doing something
2 I have to push myself very hard to do anything.
3 I can't do any work at all.

16

0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.

17

0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.

18

0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.

19

0 I haven't lost much weight, if any, lately
1 I have lost more than 5 pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.

I am purposely trying to lose weight by eating less. Yes _____ No _____

20

0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am so worried about my physical problems that I cannot think about anything else.

21

0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely

_____ Subtotal Page 2

_____ Subtotal Page 1

_____ Total Score

ITEM 3

NFER NELSON

The Padua Inventory

Instructions: *The following statements refer to thoughts and behaviours which may occur to everyone in everyday life. For each statement, choose the reply which best seems to fit you and the degree of disturbance which such thoughts or behaviours may create. Rate your replies as follows:*

0 – not at all
1 – a little
2 – quite a lot
3 – a lot
4 – very much

Name ..... Date .....

	0	1	2	3	4
1. I feel my hands are dirty when I touch money	☐	☐	☐	☐	☐
2. I think even slight contact with bodily secretions (perspirations, saliva, urine etc.) may contaminate my clothes or somehow harm me	☐	☐	☐	☐	☐
3. I find it difficult to touch an object when I know it has been touched by strangers or by certain people	☐	☐	☐	☐	☐
4. I find it difficult to touch rubbish or dirty things	☐	☐	☐	☐	☐
5. I avoid using public toilets because I am afraid of disease and contamination	☐	☐	☐	☐	☐
6. I avoid using public telephones because I am afraid of contagion and disease	☐	☐	☐	☐	☐
7. I wash my hands more often and longer than necessary	☐	☐	☐	☐	☐
8. I sometimes have to wash or clean myself simply because I think I may be dirty or 'contaminated'	☐	☐	☐	☐	☐
9. If I touch something I think is 'contaminated' I immediately have to wash or clean myself	☐	☐	☐	☐	☐
10. If an animal touches me, I feel dirty and immediately have to wash myself or change my clothing	☐	☐	☐	☐	☐
11. When doubts and worries come to my mind, I cannot rest until I have talked them over with a reassuring person	☐	☐	☐	☐	☐
12. When I talk I tend to repeat the same things and the same sentences several times	☐	☐	☐	☐	☐

THE PADUA INVENTORY

	0	1	2	3	4
13 I tend to ask people to repeat the same things to me several times consecutively even though I did understand what they said the first time	☐	☐	☐	☐	☐
14 I feel obliged to follow a particular order in dressing, undressing and washing myself	☐	☐	☐	☐	☐
15 Before going to sleep I have to do certain things in a certain order	☐	☐	☐	☐	☐
16. Before going to bed I have to hang up or fold my clothes in a special way	☐	☐	☐	☐	☐
17 I feel I have to repeat certain numbers for no reason	☐	☐	☐	☐	☐
18. I have to do things several times before I think they are properly done	☐	☐	☐	☐	☐
19 I tend to keep on checking things more often than necessary	☐	☐	☐	☐	☐
20 I check and recheck gas and water taps and light switches after turning them off	☐	☐	☐	☐	☐
21. I return home to check doors windows drawers etc., to make sure they are properly shut	☐	☐	☐	☐	☐
22. I keep on checking forms documents, cheques etc. in detail, to make sure I have filled them in correctly	☐	☐	☐	☐	☐
23. I keep on going back to see that matches cigarettes etc are properly extinguished	☐	☐	☐	☐	☐
24. When I handle money I count and recount it several times	☐	☐	☐	☐	☐
25 I check letters carefully many times before posting them	☐	☐	☐	☐	☐
26 I find it difficult to take decisions even about unimportant matters	☐	☐	☐	☐	☐
27 Sometimes I am not sure I have done things which in fact I know I have done	☐	☐	☐	☐	☐
28. I have the impression that I will never be able to explain things clearly especially when talking about important matters that involve me	☐	☐	☐	☐	☐
29 After doing something carefully I still have the impression I have either done it badly or not finished it	☐	☐	☐	☐	☐
30. I am sometimes late because I keep on doing certain things more often than necessary	☐	☐	☐	☐	☐
31 I invent doubts and problems about most of the things I do	☐	☐	☐	☐	☐
32. When I start thinking of certain things I become obsessed with them	☐	☐	☐	☐	☐
33 Unpleasant thoughts come into my mind against my will and I cannot get rid of them	☐	☐	☐	☐	☐

THE PADUA INVENTORY

	0	1	2	3	4
34. Obscene or dirty words come into my mind and I cannot get rid of them	☐	☐	☐	☐	☐
35. My brain constantly goes its own way and I find it difficult to attend to what is happening round me	☐	☐	☐	☐	☐
36. I imagine catastrophic consequences as a result of absent-mindedness or minor errors which I make	☐	☐	☐	☐	☐
37. I think or worry at length about having hurt someone without knowing it	☐	☐	☐	☐	☐
38. When I hear about a disaster, I think it is somehow my fault	☐	☐	☐	☐	☐
39. I sometimes worry at length for no reason that I have hurt myself or have some disease	☐	☐	☐	☐	☐
40. I sometimes start counting objects for no reason	☐	☐	☐	☐	☐
41. I feel I have to remember completely unimportant numbers	☐	☐	☐	☐	☐
42. When I read I have the impression I have missed something important and must go back and reread the passage at least two or three times	☐	☐	☐	☐	☐
43. I worry about remembering completely unimportant things and make an effort not to forget them	☐	☐	☐	☐	☐
44. When a thought or doubt comes into my mind, I have to examine it from all points of view and cannot stop until I have done so	☐	☐	☐	☐	☐
45. In certain situations I am afraid of losing my self-control and doing embarrassing things	☐	☐	☐	☐	☐
46. When I look down from a bridge or a very high window, I feel an impulse to throw myself into space	☐	☐	☐	☐	☐
47. When I see a train approaching I sometimes think I could throw myself under its wheels	☐	☐	☐	☐	☐
48. At certain moments I am tempted to tear off my clothes in public	☐	☐	☐	☐	☐
49. While driving I sometimes feel an impulse to drive the car into someone or something	☐	☐	☐	☐	☐
50. Seeing weapons excites me and makes me think violent thoughts	☐	☐	☐	☐	☐
51. I get upset and worried at the sight of knives, daggers and other pointed objects	☐	☐	☐	☐	☐
52. I sometimes feel something inside me which makes me do things which are really senseless and which I do not want to do	☐	☐	☐	☐	☐
53. I sometimes feel the need to break or damage things for no reason	☐	☐	☐	☐	☐

THE PADUA INVENTORY

	0	1	2	3	4
54 I sometimes have an impulse to steal other people s belongings. even if they are of no use to me	☐	☐	☐	☐	☐
55 I am sometimes almost irresistibly tempted to steal something from the supermarket .	☐	☐	☐	☐	☐
56 I sometimes have an impulse to hurt defenceless children or animals	☐	☐	☐	☐	☐
57 I feel I have to make special gestures or walk in a certain way	☐	☐	☐	☐	☐
58 In certain situations I feel an impulse to eat too much even if I am then ill	☐	☐	☐	☐	☐
59. When I hear about a suicide or a crime I am upset for a long time and find it difficult to stop thinking about it	☐	☐	☐	☐	☐
60 I invent useless worries about germs and diseases	☐	☐	☐	☐	☐

ITEM 5

1. Can you describe the feelings you are left with most strongly after reading this story?

.....
.....
.....
.....

1a. Can you name the feelings you might experience if you were in the situation described in the story?

.....
.....
.....
.....

2. On a scale of 1-7 how strong would you say these feelings would be?

Name of the feeling:

VERY STRONG						NOT AT ALL STRONG
7	6	5	4	3	2	1

Name of the feeling:

VERY STRONG						NOT AT ALL STRONG
7	6	5	4	3	2	1

Name of the feeling:

VERY STRONG						NOT AT ALL STRONG
7	6	5	4	3	2	1

I would now like you to answer some other questions about the story you have just read. For each question try and imagine what it would be like to be in the situation described in the story. There is a line scale after each question. Please mark a cross on the line in the position which would best indicate your response to each question? An example is given below:

EXAMPLE:

How loud do you think the music needs to be at a party

EXTREMELY LOUD ... EXTREMELY QUIET

|----------X----------|

The cross indicates that this person likes the music to be reasonably loud, but not extremely loud.

PLEASE TURN TO THE NEXT PAGE FOR THE QUESTIONS RELATING TO THE STORY YOU HAVE JUST READ.

1. How pleasant do you think this situation would be for you?

EXTREMELY UNPLEASANT — EXTREMELY PLEASANT

|----------|

2. In this imagined situation how responsible would you consider yourself to be for what is happening in this story?

TOTALLY RESPONSIBLE — NOT AT ALL RESPONSIBLE

|----------|

3. How responsible would you consider other people to be for what is happening in this story?

TOTALLY RESPONSIBLE — NOT AT ALL RESPONSIBLE

|----------|

4. In this imagined story how acceptable would you consider your actions and behaviour to be?

VERY ACCEPTABLE — NOT AT ALL ACCEPTABLE

|----------|

5. How acceptable do you think other people would consider your actions and behaviour to be?

VERY ACCEPTABLE — NOT AT ALL ACCEPTABLE

|----------|

In this imagined story a feeling of ..... was described

6. In this situation how acceptable would you say it is to be feeling this way?

VERY ACCEPTABLE — NOT AT ALL ACCEPTABLE

|----------|

7. How acceptable do you think other people would say it is for you to be feeling this way?

VERY ACCEPTABLE — NOT AT ALL ACCEPTABLE

|----------|

8. In this imagined situation how much control would you think of yourself as having over what is happening in the story?

TOTAL CONTROL — NO CONTROL

|----------|

9. How much control would you think of other people as having over what is happening in the story?

TOTAL CONTROL — NO CONTROL

|----------|

10. How strongly would you believe that what is happening in the story is out of anyone's control?

VERY STRONGLY — NOT AT ALL STRONGLY

|----------|

11. In this imagined situation would you imagine the outcome of this story as being harmful or beneficial for you?

VERY HARMFUL — NOT AT ALL HARMFUL

|----------|

VERY BENEFICIAL — NOT AT ALL BENEFICIAL

|----------|

12. Would you imagine the outcome of this story as being harmful or beneficial for others?

VERY HARMFUL — NOT AT ALL HARMFUL

|----------|

VERY BENEFICIAL — NOT AT ALL BENEFICIAL

|----------|

Forgetting about the story for a moment, could you now briefly describe the main difficulties/symptoms you experience as part of OCD/phobia/anxiety:

.....
.....
.....
.....
.....
.....
.....

13. In this imagined story how likely do you think it would be that you would begin to experience any of the difficulties you have described above?

EXTREMELY LIKELY — NOT AT ALL LIKELY

|----------|

14. In this imagined situation a feeling of ..... was described. How likely do you think it would be for you to begin to experience any of the difficulties you have described if you were feeling this way in other situations?

EXTREMELY LIKELY — NOT AT ALL LIKELY

|----------|

ITEM 4

YALE-BROWN OBSESSIVE COMPULSIVE SCALE (9/89)

Y-BOCS TOTAL (add items 1-10) ☐

PATIENT NAME_____ DATE_____
PATIENT ID_____ RATER_____

	None	Mild	Moderate	Severe	Extreme
1. TIME SPENT ON OBSESSIONS	0	1	2	3	4

1b. OBSESSION-FREE INTERVAL (do not add to subtotal or total score)	No Symptoms	Long	Moderately Long	Short	Extremely Short
	0	1	2	3	4

2. INTERFERENCE FROM OBSESSIONS	0	1	2	3	4
3. DISTRESS OF OBSESSIONS	0	1	2	3	4
	Always resists				Completely yields
4. RESISTANCE	0	1	2	3	4
	Complete control	Much control	Moderate control	Little control	No control
5. CONTROL OVER OBSESSIONS	0	1	2	3	4

OBSESSION SUBTOTAL (add items 1-5) ☐

	None	Mild	Moderate	Severe	Extreme
6. TIME SPENT ON COMPULSIONS	0	1	2	3	4

6b. COMPULSION-FREE INTERVAL (do not add to subtotal or total score)	No Symptoms	Long	Moderately Long	Short	Extremely Short
	0	1	2	3	4

7. INTERFERENCE FROM COMPULSIONS	0	1	2	3	4
8. DISTRESS FROM COMPULSIONS	0	1	2	3	4
	Always resists				Completely yields
9. RESISTANCE	0	1	2	3	4
	Complete control	Much control	Moderate control	Little control	No control
10. CONTROL OVER COMPULSIONS	0	1	2	3	4

COMPULSION SUBTOTAL (add items 6-10) ☐

	Excellent				Absent
11. INSIGHT INTO O-C SYMPTOMS	0	1	2	3	4

	None	Mild	Moderate	Severe	Extreme
12. AVOIDANCE	0	1	2	3	4
13. INDECISIVENESS	0	1	2	3	4
14. PATHOLOGIC RESPONSIBILITY	0	1	2	3	4
15. SLOWNESS	0	1	2	3	4
16. PATHOLOGIC DOUBTING	0	1	2	3	4

17. GLOBAL SEVERITY	0	1	2	3	4	5	6
18. GLOBAL IMPROVEMENT	0	1	2	3	4	5	6

19. RELIABILITY EXCELLENT = 0 GOOD = 1 FAIR = 2 POOR = 3

ITEM 6

BRIEF DESCRIPTION OF SYMPTOMS: CODE:

ANGER																				
PRIDE																				
GUILT																				
ANXIETY																				

ITEM 7

RESEARCH ASSESSMENT INFORMATION

1. Date of birth:

2. SEX Female/Male

3. OCCUPATION .....
.....

4. Please give a brief description of the main problematic symptoms being experienced by the participant.
.....
.....
.....
.....
.....

5a. Thinking back to the four stories you have just read, can you say which story would be most likely to trigger any of the symptoms/difficulties you have just described?
.....
.....

b. Which story is least likely to cause those difficulties?
.....
.....

6. Please indicate an approximate length of time the participant has been experiencing symptoms of obsessive compulsive disorder or phobic disorder?

.....years .....months

7. What "treatment" has the participant previously received regarding these difficulties and for what length of time?
.....
.....
.....
.....

8. What "treatment" is the participant currently receiving?
.....
.....
.....
.....

9. If the participant currently taking any medication? YES?NO
If Yes please would you list the current medication below..

.....
.....
.....
.....

INFORMATION SHEET

It is known that in any given situation individual people may think in different ways. This can then affect how each person might feel or behave. Therefore, by understanding a person's thoughts it can also help us understand that person's actions and emotions.

This is true for people experiencing symptoms of obsessive compulsive disorder(OCD), phobia or worry ie.finding out how someone might think in a variety of situations may help us learn more about why that person responds in a certain way. If we can increase our understanding of these things, we are then also in a better position to improve any help which can be offered.

In this study we want to look at how people suffering from obsessive compulsive disorder and people suffering with phobia or anxiety/worry might think, in a few situations. This should help us to learn more about why different people might develop different symptoms, but perhaps more importantly how to treat different symptoms more effectively.

If you agree to take part in this research we would be asking you to read a number of different stories. You would then be asked to rate these stories according to how you might think in such a situation. For example, there may be a story where someone has just won the lottery and you might be asked to rate how pleasant an experience this is?!

Each person will be asked to study four different stories, rating several things for each one. Some of the stories will probably not be as easy to rate as in the example, but there will always be a researcher with you to answer any questions.

For each situation you will also be asked to think about how likely such a situation would be to trigger the symptoms that you sometimes experience.

You will also be asked to give very brief, outline information (no detail)about your main difficulties and any help you have/are receiving, to complete two very short questionnaires about how you have been feeling over the past week and two short questionnaires about how often and how much you experience certain thoughts or behaviours. All information will be anonymous and confidential and will only be used in relation to this research study.

The interview will probably last about 1-1½ hours, but you would be able to take a break if you wished to do so. You will also be provided with tea or coffee!

At the end of this interview some people will be asked if they would be willing to participate in another half hour interview.

This second part would involve you discussing those stories you thought would be most or least likely to trigger the symptoms you experience. You will be asked to think carefully about these situations and to talk a little bit about what you might be thinking or feeling in each case.

It is possible that by the end of this interview you will have begun to understand or think about your own situation a little differently. This can often be helpful, but can sometimes be a little bit unsettling if you do not have the chance to talk about it with anyone else. The researcher will be available to answer questions and will also offer some time at the end of the interview if you wanted to talk about anything from the interview.

I hope this has given you a clear idea of what would be involved in the research, but I would be very happy to answer any remaining questions or concerns. I can be contacted at the number given below.

It is important that you are aware that taking part is voluntary. Also, if you agree to take part you will still be able to withdraw your consent at any time. This can be done without you having to give a reason and without it affecting any other contact you might have with the service.

Thank you for taking the time to read this information. I hope it has helped you in making a decision about whether or not to give some more of your time to this work. I look forward to speaking with you.

Thank you.

Best wishes.

Jackie MacCallam
Trainee Clinical Psychologist

Contact Number: 0117 9286551 (A message can always be left for me on this number if I am not personally available)

Contact Address: Psychology Department
Barrow Hospital
Barrow Gurney
BRISTOL

ITEM 9

UBHT
TEACHING CARE

Mental Health Services
Barrow Hospital
Barrow Gurney
Bristol BS19 3SG

Please ring direct line number:
0117 9286551

Dear Dr.

RE:

I am writing to inform you that , who I believe is a patient of yours, has agreed to take part in the research project I am carrying out as part of my Doctoral Degree in Clinical Psychology.

I have enclosed an information sheet which briefly outlines the research and gives an indication of what will be involved for this client. Any involvement in the study will be time limited and will obviously not interfere with the service one would normally receive from Psychology. However, if you have any further questions or are concerned about the involvement of this person I would be very happy to discuss this further.

If you wish to contact me a message can be left at the above number, should I not be available, and I will call you back as soon as possible.

Thank you.

Best wishes

Jackie MacCallam
Trainee Clinical Psychologist

CONSENT FORM

RE: Cognitive Appraisals in Anxiety Disorders (Ways of thinking when you are feeling anxious)

Researcher: Jackie MacCallam, Trainee Clinical Psychologist.
Plymouth University

I have read the letter and information sheet which explains the above research and have understood their content.

I also understand that my involvement will in no way affect any other contact I might have with this service and that any information will be confidential and only used in relation to this research study.

I am aware that I can withdraw my involvement at any point, without having to give a reason and without this affecting any future services I might receive.

I am willing to take part in this study and agree to be a participant.

Name:.....

Signature.....

Date:.....

Signature of researcher:.....

ITEM 1(1)

SOUTHMEAD HEALTH Services

A NATIONAL HEALTH SERVICE TRUST

30 July 1996

Administration Department
Trust Headquarters
Southmead Hospital
Bristol BS10 5NB

Tel: (0117) 959 5207 (direct line)
Fax: (0117) 959 0902

Ms J Maccallam
9 Egerton Brow
Bishopston
Bristol
BS7 8HW

Dear Ms Maccallam

PROJECT 36/96: COGNITIVE APPRAISALS IN ANXIETY DISORDER

I am pleased to inform you that following its meeting on 5 June 1996, the Medical Research Ethics Committee has approved your application in respect of the above project.

Approval is given on the understanding that:-

a) Any ethical problems arising in the course of the project will be reported to the Ethics Committee;

b) Any change in the protocol will be reported to the Ethics Committee;

c) An annual progress report will be submitted and a brief final report on completion.

Yours sincerely

Sue Bowman

Mrs S B Bowman
Secretary
Southmead Medical Research Ethics Committee

U B H T
TEACHING CARE

Trust Headquarters
Marlborough Street
Bristol BS1 3NU
Fax 0117 925 6588

01 October 1996

Please ring direct line number:
0117 928 3613

Mrs J Maccallam
Trainee Clinical Psychologist
9, Egerton Brow
Bishopston
Bristol
BS7 8HW

Dear Mrs Maccallam

E3462 Cognitive appraisals and anxiety disorders

I am pleased to advise that the revised information sheet submitted with your letter dated 1st August was considered by the Research Ethics Committee at their meeting held on 27 September, 1996 and approval given.

Yours sincerely

N. Nathoo

Naaz Nathoo
Secretary to the Research Ethics Committee

What I am going to ask you to do is read a number of stories. They are quite short, but some do describe some quite difficult situations and emotions.

After reading each story I am then going to ask you to answer a number of questions. When you are answering the questions try and imagine what it would be like to be the person in the story. There are no right or wrong answers - the questions are just asking people to think about how they might think or feel. Try to answer with your first response and not to spend too much time on each question.

Please ask if there is anything which is not clear or anything you are not sure about - I can be available throughout the whole session if you would find that helpful. Also, if you want to take a break at any time please feel free to do so.

After reading the stories I would then like to ask you a few questions about your situation and to ask you to complete some tick box questionnaires.

Please remember if there is anything you do not wish to answer please leave it out and please stop if you decide you do not want to continue with the interview.

Do you have any questions a this stage and would you like tea or coffee now or later..... THANK YOU.

'Norm' Scores on the Padua Inventory:

SAMPLE		n	Mean	SD
Dutch:	male	188	25.8	20.8
	female	242	29.4	20.7
American	male	294	42.1	26.3
	female	384	41.0	25.4
Italian	male	489	53.6	27.7
	female	478	62.5	29.2

TABLE A1: To Show means and standard deviations of the PI scores in an Italian, American and Dutch non-clinical sample.

Clinical Sample		n	mean	SD
OCD	male	35	83.6	34.8
	female	40	98.6	32.3
Other 'Neurotic' disorders	male	35	50.2	28.9
	female	40	66.5	32.4

TABLE A2: To Show mean and standard deviation of PI scores in an Italian clinical population.

Copy of Anxiety Vignette:

Imagine that you work for a small firm and have been asked to do a short talk for a group of people at your work place. You are not keen on speaking in public, but you don't feel you can say no. You are told that there will probably be about 25 people there. The thought of 25 people makes you feel a little bit anxious and wobbly, but you decide it will be OK You will only have to talk for a short time,. You have never done anything like this before, but you don't think too much else about it until the day of the talk. Then, suddenly, you find yourself in a large hall, which feels like an empty barn. You are starting to feel a bit nervous when you begin to realise how many people are coming into the hall. The more people you see, the more worried you start to feel. Your stomach begins to turn over and you begin to feel a bit restless. Surely all these people aren't coming to your talk..... You pluck up courage to ask how many people are expected - up to 60 people is the reply - no-one had said that there might be this many people... On hearing this you feel your whole body begin to shake. You are perching nervously on the edge of your seat. You don't think you are going to be able to do this... Your mouth has become dry and you can't seem to concentrate on one thing at a time. Your eyes keep switching from one thing to another. You see a chair and desk being set up - this must be for you. How awful... You don't know what you are going to do ... you can't sit in front of all these people and give a talk. You try to look at your notes but they don't seem to make any sense. You notice each person as they sit down; some seem to look annoyed already. You begin to wring your hands and wonder what on earth you should do... You feel so nervous... what if you can't get any words out,, What if you go completely blank and nothing comes out of your mouth. You are feeling worse and worse, but just don't know how to calm yourself down. You hadn't thought you would feel this worried or anxious... Everyone was being seated.. they were all going to think you were awful, but are you going to have to start talking in a minute.. How on earth are you going to cope...?

Copy of Guilt Vignette

Imagine you have a very good friend; someone you have known for many years and someone you are very fond of. This friend is very fond of you too. A few weeks ago your friend had asked you if you would help out with some decorating. At the time you had promised to help, especially as you knew some bits of the house were difficult for one person to reach on her own. You arranged a day when you would go round and help and said you would see her then. This day soon arrives, but you are so busy with you gardening that it totally slips your mind that you are supposed to be helping your friend. You haven't forgotten on purpose, you just did not think of it. You are still busy in you garden, in the afternoon, when you hear the phone ring. You answer it to be given the awful news that your friend is in hospital and unconscious. She had fallen of f the ladder whilst decorating. She had banged her head very severely and had only been found because a neighbour had heard the crash and had gone round to help. The doctors at the hospital are not sure of the extent of you r friends injuries and are still completing tests. As soon as you hear this news you suddenly remember that you were supposed to have been helping you friend with her decorating today. You immediately get a sinking feeling in your stomach and begin to feel a bit sick and a bit frantic. You begin to think that if you had only gone round to help your friend that this would not have happened. You feel so guilty. If you hadn't been so concerned with getting your own jobs done you friend would not be in hospital now... What if she doesn't recover? You keep thinking that you could have prevented this. You knew that some of the decorating was a bit tricky.... You should have remembered and gone round.. You didn't mean for this to happen...., but you feel so guilty, like the bottom is about to fall out of you stomach. You want to put things right, turn the clock back, but the lumpy, sick feeling is getting worse.. What are you going to do...? Would your friend ever forgive you? You really hadn't meant for this to happen... but you can't help feeling so bad and so guilty.

Copy of Anger Vignette:

Imagine you are someone who works really hard, putting you heart and soul into your work. You are working on a project, but need the help of your boss to complete it. Your boss is very difficult to get hold of and does not return you r calls. You have left lots of messages and tried to arrange times when you could meet up, without success. Whenever you see the boss, he is polite, but is always too busy to talk. This begins to annoy you, but you don't know what to do about it. Anyway, there is a big meeting arranged where all the top bosses are to get together. You go along and you and your boss are asked about why the project is not complete. You begin to feel awkward because you will have to explain about the problems you have been having with you boss. However, before you can say anything your boss has launched into a long story about how you have been having difficulty in managing you work time at work and that this is why the project had been slowed up. He says nothing about himself. You also hear your boss lie about the meetings saying he had arranged them but that you have not turned up to them...! You cannot believe what you are hearing. Your boss has lied to save his own skin. How dare he? You can feel your face going red, your fists clenching and your jaws locked tight together. How dare the boss show you up in front of all these people? What a low down thing to do. To top it all you are called to see one of the managers after the meeting and given a verbal warning. This makes you feel even more angry, but you are unable to say anything. AS you leave the room you can feel the anger boiling... you want to shout and scream. You are absolutely furious: angry at your boss for being so deceitful and unfair, angry at the others for not realising what has gone on.. Are they really that stupid?.. and angry at yourself. Why the hell didn't you say something? Your boss shouldn't be allowed to get away with this. No-one was going to treat you like this and get away with it. You feel like hitting something.. like you will burst if you don't. Your jaw is tight.. you feel as if you are about to scream.. you are so angry...furious.

Copy of Pride Vignette:

Imagine that your life long ambition is to run a marathon. You are determined to do this, but none of your family or friends think you will make it. They keep telling you that you are too old and that you will never be able to get fit enough. This makes you even more determined and you begin your training for a marathon the following year. You train hard every week throughout the year, until finally the big day arrives and you are on the starting line. By this time everyone is behind you and lots of people are there to support you. It is a tough race and there are times when you feel so tired that you wonder if you are going to make it. However, something keeps you going and you eventually find yourself approaching the finish line. You have done it. You feel exhausted, but elated. You have just run a marathon... All your family and friends come up to congratulate you, giving you hugs, saying how well you have done. You feel so good about yourself. You have done well and have proved everyone wrong. You can feel you r body swelling with pride, like you want to walk with your head held high for everyone to see. Not everyone could have done what you have done. Against all odds you have achieved the ambition of a life time. This day you will be proud to remember. AS these thoughts fill your mind you feel a tingly, warm feeling inside. You can't stop beaming. You showed courage and determination, even when things got tough - you feel so proud of that. At that moment you feel as if you could run another marathon, or at least run down the street, waving your arms and shouting out 'I've done it...!' You have never felt so proud.....

Details of the Flesch Readability tests:

Vignette	Number of words	Flesch Reading ease
Anxiety	430	83.6
Guilt	410	82.5
Anger	417	84.7
Pride	309	79.8

TABLE A3: To Show the Number of Words and the Flesch Reading Ease for each vignette.

Details of the Descriptive data for each Participant.

Non-Clinical Group: 10 subjects (5 females, 5 males)

SEX	AGE	PADUA	BDI	BAI
male	34	20	8	6
female	50	27	9	2
female	45	16	7	7
male	23	16	9	2
male	54	0	1	1
female	50	30	7	5
female	30	18	9	14
female	55	34	8	1
male	32	9	0	0
male	43	14	1	2
	RANGE	RANGE	RANGE	RANGE
	23-56	0-34	0-9	0-14

Anxiety Group: 10 subjects (7 females, 3 males)

SEX	AGE	PADUA	BDI	BAI
female	37	4	7	19
male	46	20	20	37
male	57	42	21	29
female	38	46	12	19
female	19	33	16	32
female	40	13	7	48
female	23	52	6	20
female	32	50	21	34
male	31	51	25	30
female	55	24	12	26
	RANGE	RANGE	RANGE	RANGE
	20-60	4-52	6-25	19-48

OCD Group: 10 Subjects (5 females, 5 males)

SEX	AGE	PADUA	BDI	BAI	Y-BOCS
female	65	65	38	13	20
female	41	110	9	4	20
female	27	101	11	22	19
female	60	66	28	22	20
female	43	134	36	44	30
male	34	70	10	18	19
male	35	104	40	27	--
female	43	67	20	21	20
male	46	122	26	39	21
male	30	134	17	26	29
	RANGE	RANGE	RANGE	RANGE	RANGE
	27-60	66-134	9-40	4-43	19-30

Details of the Statistical Analyses carried out on the Descriptive Data

Name of Measure	df	F	Sig (p)
BDI	2	11.517	.000
BAI	2	22.576	.000
PI	2	43.707	.000
AGE	2	.422	.660
Responsibility related to occupation	2	2.830	.077
Intellectual ability related to occupation	2	.448	.644

TABLE A4: To Show Results of Anova analyses for measures of depression, anxiety, symptoms of OCD, level of responsibility and level intellectual ability.

Group Comparisons	Mean Difference.	Std Error	Sig
Anxiety with 'Controls	25.40	3.962	.000
OCD with 'Controls'	19.60	3.962	.000
OCD with Anxiety	-5.80	3.962	.357

TABLE A5: To Show Results of Scheffe Post hoc analysis for the Measure of Anxiety.

Name of Measure	Chi-square	df	Sig.
BDI	14.676	2	.001
PI	21.047	2	.000

TABLE A6: To Show Results of Kruskal-Wallis test for the Measures of Depression and OC Symptoms.

Group Comparisons	Mean Difference	Std Error	Sig.
Anxiety with 'Controls'	8.8	3.667	.074
OCD with 'Controls'	17.60	3.667	.000
OCD with Anxiety	8.80	3.667	.074

TABLE A7: To Show Results of Scheffe Post hoc analysis for the Measure of Depression .

Group Comparisons	Mean Difference.	Std Error	Sig
Anxiety with 'Controls	15.1	8.959	.229
OCD with 'Controls'	78.90	8.959	.000
OCD with Anxiety	63.80	8.959	.357

TABLE A8: To Show Results of Scheffe Post hoc analysis for the Measure of OC Symptoms.

Details of the wording used by each Participant to Describe the emotions that were evoked by each of the four vignettes.

Pp	OCD GROUP	ANXIETY GROUP	'CONTROL' GROUP
1	Apprehension, determination, fear of looking a fool.	Pounding heart, restless, confused	Anxious, angry, despair
2	Fear, Unprepared, sickness	Anxiety, fear, fear of humiliation	Awful, nervous, pressure
3	Nervous, self conscious, inadequate	Nervous, panic	Terrified, nervous, shaky
4	Panic, nervous	Fear, anxious	Nervous, anxiety
5	Fear, anxiety, nervous, embarrassment	Panic	Nervous, anxious
6	Extremely nervous	Fear, anxiety, dread	Panic, nervous, wanting to calm things down
7	Fear, self hatred	Panic	Panic, feeling ill
8	Panic, trapped, helpless	Fear, panic, tension	Nervous, anxiety, worry
9	Fear, sickness, wanting to get away	Fear, nervous, wanting to escape	Anxiety, fear, lack of concentration, frustration
10	Anxiety	Anxious, panic	Worry, anxiety, fear of 'drying up'

TABLE A9: A summary of the words each Participant used to describe the emotions which were evoked by the Anxiety Vignette.

Pp	OCD GROUP	ANXIETY GROUP	'CONTROL' GROUP
1	Guilt, fretting, anxiety	Heart pounding, sick, crying	Guilt, worry, fear
2	Guilt, fear	Regret, guilt, recrimination	Rationalise that it is was no-one's fault, fate.
3	Fear, guilt, anxiety	Guilt, worry	Guilty, upset
4	Guilt, disappointment in self	Worry, guilt	Guilt, concern, remorse
5	Guilt	Guilt, anger	Guilt, anxiety
6	Guilt, anxiety	Guilt, worry	Guilt, concern, sure friend will understand
7	Guilt, shame, embarrassment	Guilt, panic, upset	Very guilty, embarrassed
8	Concern, worry, guilt	Guilt	Guilt, despair
9	Guilt, panic, fear, anxiety	Guilt, upset	Guilt, responsibility
10	Guilt, worry, upset	Why didn't friend make contact?	Guilt, anxiety, cross with self

TABLE A10: A summary of the words each Participant used to describe the emotions which were evoked by the Guilt Vignette.

Pp	OCD GROUP	ANXIETY GROUP	'CONTROL' GROUP
1	Anger, injustice, frustration	Tense, hot, wanting to shout	Anger, frustration, loss of pride
2	Anger, misunderstood, helpless	Frustration, anger, vulnerable	Anger, annoyed, betrayed
3	Anger, de-motivated	Put upon, angry, emotional	Angry, resentful, frustrated
4	Seething very annoyed, humiliated	Wouldn't have reacted in this way, confidence in work ability.	Anger, frustration, despair
5	Anger, impatience	Furious	Anger, frustration
6	Anger, shame, anxiety	Frustration, humiliation, anger	Anger, frustration, disappointment
7	Anger, contempt, cold	Anger, frustration	Helpless, angry
8	Anger, desire for justice	Anger, frustration, tension	Frustration, anger
9	Anger, frustration, injustice, desperation	Anger	Anger, frustration, injustice
10	Sick, worry, let down	Upset, hurt, angry	Anger, injustice

TABLE A11: A summary of the words each Participant used to describe the emotions which were evoked by the Anger Vignette.

Pp	OCD GROUP	ANXIETYGROUP	'CONTROL'GROUP
1	Pride	Positive experience, but crowds would be negative	Happy, proud, relief
2	Euphoria invincibility	Elation	Pride, glad it's over
3	Extreme pride	Elation, satisfaction, pride	Elation, pride
4	Pride, happiness	Pride, sense of achievement	Excitement, elation
5	Embarrassed, relief, pride	Nervous, happy, panic	pride, elation, good
6	Arrogance, complacency	Elated, happy, pride	Achievement, good
7	Pride, achievement, elation	Pride, satisfaction	Happy, satisfied, proud
8	Relief, self congratulations	Satisfaction, achievement, pride	Tearful, emotional, proud
9	Pride, achievement, up yours!	Elation, pride, happy	Proud, satisfied
10	Couldn't imagine feelings in this situation.	Content, happy, pride	Pride, satisfaction, purpose

TABLE A12: A summary of the words each Participant used to describe the emotions which were evoked by the Pride Vignette.

A descriptive summary of the information tabled above is given below:

Anxiety Situation:

OCD group: Eight participants used the words anxiety and/or nervousness and/or described physical symptoms of anxiety to describe the emotions associated with this situation. Often a combination of these phrases was used and this would sometimes include

the words panic and fear. The two other people used the words fear and/or panic in the absence of the words anxiety or nervousness.

Anxiety Group: Seven participants used the words anxiety and/or nervousness and/or described physical symptoms of anxiety to describe the emotions associated with this situation. Often a combination of these phrases was used and, as in the OCD group, this would sometimes include the words panic and fear. The three other people used the words fear and/or panic in the absence of the words anxiety or nervousness.

Non-clinical Group: All ten participants described feelings of nervousness and/or anxiety and/or described physical symptoms of anxiety relating to describe the emotions associated with this situation. As with the other groups a combination of terms was often used and this also included use of the word panic.

Guilt Situation:

OCD Group: All ten participants used the word guilt to describe the emotion associated with this situation. However, this was sometimes combined with another feeling such as anxiety, fear, worry, embarrassment and upset.

Anxiety Group: Eight of the participants described the emotions associated with this situation using the word guilt, but again this was sometimes combined with another feeling such as worry, upset and also anger in this case. One of the other two participants described physical feelings of anxiety e.g. heart pounding and the tenth participant didn't describe a feeling, but was left asking the question of why the friend had not telephoned.

Non-clinical Group: Nine out of the ten participants used the word guilt to describe the emotions associated with this situation. This was sometimes combined with another feeling, as was described for the other two groups. The tenth person did not describe feelings but said they would try to rationalise the situation as something which could happen to anyone.

Anger Situation:

OCD Group: Nine out of the ten participants used the words anger or extreme annoyance to describe the feelings associated with this situation. This was often combined with other feelings, such as frustration, injustice and helplessness. The tenth person described feeling worried and let down.

Anxiety Group: Eight participants used the word angry/anger and one person described physical sensations of anger to describe the feelings associated with this situation. Again, this was often combined with feelings of frustration. The last participant said that they would not have reacted with anger, but would have felt confident enough about his/her work to show the boss to be in the wrong.

Non-clinical Group: All ten participants used the words angry or anger to describe the emotions associated with this situation, a description which, again, was usually combined with feelings of frustration.

Pride Situation:

OCD Group: Six participants used the word pride and one person used the words self congratulations to describe the emotions associated with this situation. This was sometimes associated with other feelings such as achievement and, in one case, relief. Of the other three people one person described feelings of euphoria, one person described feelings of arrogance and one person said they were left with feelings of pride for the character in the story, but couldn't imagine being in this situation themselves.

Anxiety Group: Seven out of the ten participants used the word pride to describe the emotions associated with this situation, often combined with feelings of happiness or satisfaction. Out of the other three participants, one person described feelings of elation, in

the absence of the word pride and the two other people described positive feelings of happiness, but also described negative feelings of nervousness and panic.

Non-clinical Group: Eight participants used the word pride and/or proud to describe the emotions associated with this situation, which was often combined with feelings of satisfaction and happiness and, again in one case, relief. The other two participants described good feelings of elation and achievement, but in the absence of the word pride.

Details of the mean raw scores for each participant, in the OCD, anxiety and non-clinical groups, on each appraisal dimension

GROUP	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
OCD	3.2	7.0	8.85	9.55	5.05	4.3	6.15
Anxiety	4.1	9.95	9.4	9.55	10.1	4.1	6.0
Non-clinical	8.5	6.8	8.05	10.8	7.05	3.3	5.15

GROUP	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
OCD	7.8	8.2	8.35	6.4	10.95	11.3	5.0
Anxiety	8.05	8.4	11.0	3.9	9.3	10.2	1.5
Non-clinical	5.1	6.75	14.95	10.72	9.19	12.5	6.2

TABLE A13: To Show Mean Raw Scores for each group, on each Appraisal Dimension, in the Situation of Anxiety

GROUP	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
OCD	2.75	11.05	8.2	6.7	10.05	3.85	5.25
Anxiety	4.7	7.2	10.5	9.1	7.3	2.85	5.35
Non-clinical	7.5	7.45	7.6	7.1	7.65	3.1	4.6

GROUP	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
OCD	10.9	10.05	13.3	2.95	13.05	4.15	1.65
Anxiety	5.5	6.6	12.35	3.45	13.50	2.56	1.65
Non-clinical	9.2	9.25	10.55	7.65	10.65	6.25	2.65

TABLE A14: To Show Mean Raw Scores for each group, on each Appraisal Dimension, in the Situation of Guilt

GROUP	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
OCD	9.05	5.3	10.9	9.7	5.3	2.2	3.85
Anxiety	8.35	2.7	10.85	12.4	4.2	3.05	4.15
Non-clinical	9.2	4.4	8.6	11.05	6.45	2.75	5.5

	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
OCD	6.75	8.15	12.25	4.85	11.35	6.55	1.35
Anxiety	5.00	6.95	13.25	2.10	8.45	9.95	1.60
Non-clinical	7.40	9.7	10.33	4.56	8.64	9.2	2.35

TABLE A15: To Show Mean Raw Scores for each group, on each Appraisal Dimension, in the Situation of Anger

	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
OCD	4.3	10.15	3.2	11.2	9.85	1.7	2.9
Anxiety	1.0	11.9	1.6	12.2	10.8	1.1	0.9
Non-clinical	2.25	8.40	2.95	11.65	10.0	2.3	3.75

	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
OCD	3.55	4.25	2.6	13.8	7.25	13.25	12.75
Anxiety	1.05	2.35	1.83	12.95	6.2	12.6	9.65
Non-clinical	2.25	3.15	2.8	12.72	6.56	12.85	9.85

TABLE A16: To Show Mean Raw Scores for each group, on each Appraisal Dimension, in the Situation of Pride

Details of the mean raw scores for each of the four participants, who were 'recovered' from OCD.

	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
Four participants, 'recovered' from OCD	4.88	6.38	9.5	8.38	7.88	4.38	7.13

	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
Four participants, 'recovered' from OCD	6.25	8.5	12.38	5.25	10.25	11.12	5.63

TABLE A17: To Show the Mean Raw Scores, on all the Appraisal Dimensions, for the Four Participants who had 'recovered' from OCD, in the Situation of Anxiety

	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
Four participants, 'recovered' from OCD	4.00	11.0	7.00	6.75	12.38	6.13	5.88

	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
Four participants, 'recovered' from OCD	10.5	9.13	9.25	4.75	12.5	5.13	1.25

TABLE A18: To Show the Mean Raw Scores, on all the Appraisal Dimensions, for the Four Participants who had 'recovered' from OCD in the Situation of Guilt

	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
Four participants, 'recovered' from OCD	11.87	2.88	12.5	11.87	2.63	2.13	5.5

	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
Four participants, 'recovered' from OCD	3.88	6.38	12.75	4.75	7.5	7.87	2.00

TABLE A19: To Show the Mean Raw Scores, on all the Appraisal Dimensions, for the Four Participants who had 'recovered' from OCD, in the Situation of Anger

	Sresp	Ores	Scont	Sicont	Ocont	Sfeel	Ofeel
Four participants, 'recovered' from OCD	2.25	11.25	2.38	10.25	12.13	3.00	3.75

	Sact	Oact	Sbene	Sharm	Obene	Oharm	Pleasure
Four participants, 'recovered' from OCD	3.25	5.38	7.00	13.25	8.5	7.87	11.38

TABLE A20: To Show the Mean Raw Scores, on all the Appraisal Dimensions, for the Four Participants who had 'recovered' from OCD, , in the Situation of Pride

Details of Statistical Analyses used to test Hypotheses 1a-1d

Source	df	F	Sig
Appraisals	13	7.389	.000
Group	2	.149	.863
Group x Appraisals	26	2.16	.001

TABLE A21: To Show Results of Repeated Measures Anova for the Situation of Anxiety

Source	df	F	Sig
Appraisals	13	3.5	.000
Group	2	..356	.704
Group x Appraisals	26	2.048	.002

TABLE A22: To Show Results of Repeated Measures Anova for the Situation of Anxiety, when depression is controlled for in the analysis.

Source	df	F	Sig
Appraisals	13	19.502	.000
Group	2	1.405	.263
Group x Appraisals	26	2.048	.002

TABLE A23: To Show Results of Repeated Measures Anova for the Situation of Guilt

Source	df	F	Sig
Appraisals	13	6.869	.000
Group	2	1.663	.210
Group x Appraisals	26	1.794	.011

TABLE A24: To Show Results of Repeated Measures Anova for the Situation of Guilt, when depression in controlled for in the analysis

Source	df	F	Sig
Appraisals	13	19.046	.000
Group	2	.548	.585
Group x Appraisals	26	.989	.483

TABLE A25: To Show Results of Repeated Measures Anova for the Situation of Anger

Source	df	F	Sig
Appraisals	13	7.394	.000
Group	2	.727	.494
Group x Appraisals	26	1.217	.219

TABLE A26: To Show Results of Repeated Measures Anova for the Situation of Anger, when depression is controlled for in the analysis.

Source	df	F	Sig
Appraisals	13	57.3	.000
Group	2	5.021	.015
Group x Appraisals	26	1.044	.409

TABLE A27: To Show Results of Repeated Measures Anova for the Situation of Pride

Source	df	F	Sig
Appraisals	13	21.819	.000
Group	2	3.577	.044
Group x Appraisals	26	1.477	.066

TABLE A28: To Show Results of Repeated Measures Anova for the Situation of Pride, when depression is controlled for in the analysis.

<u>Details of Statistical analyses carried out to test Hypotheses 2-6</u>

Emotional Situation	df	F	Sig.
Guilt	2	4.93	.015
Guilt: when depression was controlled for	2	1.59	.223
Anxiety	2	4.43	.022
Anxiety: when depression was controlled for	2	3.83	.035
Anger	2	.075	.928
Anger: when depression was controlled for	2	.135	.874
Pride	2	3.466	.046
Pride: when pride was controlled for	2	4.580	.020

TABLE A29: To Show Results of One-way Anova for the appraisal of Personal Responsibility in the Situations of Guilt, Anxiety, Anger and Pride

Emotional Situation	df	F	Sig.
Guilt	2	1.26	.302
Guilt: when depression was controlled for	2	1.71	.201
Anxiety	2	.245	.784
Anxiety: when depression was controlled for	2	.482	.623
Anger	2	1.776	.188
Anger: when depression was controlled for	2	.575	.570
Pride	2	1.560	.229
Pride: when depression was controlled for	2	1.469	.243

TABLE A30: To Show Results of One-way Anova for the appraisal of Personal Control in the situations of Guilt, Anxiety, Anger and Pride.

Aspect of Appraisal	"according to self"			"according to others"		
Emotional Situation	**df**	**F**	**Sig**	**df**	**F**	**Sig**
Guilt	2	.273	.763	2	.126	.882
Guilt: when depression was controlled for	2	.310	.736	2	.098	.907
Anxiety	2	.208	.813	2	.189	.829
Anxiety: when depression was controlled for	2	.219	.805	2	.030	.971
Anger	2	.229	.797	2	.639	.536
Anger: when depression was controlled for	2	.161	.852	2	3.146	.060
Pride	2	1.780	.188	2	4.002	.030
Pride: when depression was controlled for	2	2.190	.132	2	6.286	.006

TABLE A30: To Show Results of One-way Anova for the appraisal of 'acceptability of feelings' according to self and others in the Situations of Guilt, Anxiety, Anger and Pride.

Aspect of Appraisal	"according to self"			"according to others"		
Emotional Situation	**df**	**F**	**Sig**	**df**	**F**	**Sig**
Guilt	2	5.159	.013	2	1.901	.169
Guilt: when depression was controlled for	2	4.638	.019	2	2.153	.136
Anxiety	2	1.525	.236	2	.528	.596
Anxiety: when depression was controlled for	2	.517	.602	2	.563	.576
Anger	2	.802	.459	2	1.147	.333
Anger: when depression was controlled for	2	.802	.459	2	1.781	.188
Pride	2	2.785	.080	2	1.121	.341
Pride: when depression was controlled for	2	2.153	.136	2	.807	.457

TABLE A31: To Show Results of One-way Anova for the appraisal of "acceptability of actions according to self and others in the Situations of Guilt, Anxiety, Anger and Pride.

Emotional Situation	**df**	**F**	**Sig**
Guilt	2	5.54	.010
Guilt: when depression was controlled for	2	2.91	.073
Anxiety	2	6.67	.005
Anxiety: when depression was controlled for	2	5.75	.009
Anger	2	1.585	.224
Anger: when depression was controlled for	2	2.233	.128
Pride	2	.431	.655
Pride: when depression was controlled for	2	.251	.780

TABLE A31: To Show results of One-way Anova for the appraisal of 'Harm to Self' in the Situations of Guilt, Anxiety, Anger and Pride.

Details of Statistical analyses carried out to test Hypothesis 7

Appraisal Dimension	Group	Likelihood of symptoms in this emotional situation	Likelihood of symptoms in other related emotional situations
Harm to self	OCD	.781**	.902**
Personal responsibility	OCD	-.153	-.011
Harm to self	Anxiety	.071	.051
Personal responsibility	Anxiety	-.245	-.307

** indicates significance at the 0.01 level (2-tailed).

TABLE A32: To Show Results of a Pearson Product moment Correlation for the appraisals of personal responsibility and perceived harm to self in the situation of Anxiety.

Appraisal Dimension	Group	Likelihood of symptoms in this emotional situation	Likelihood of symptoms in other related emotional situations
Harm to self	OCD	.841**	.789**
Personal responsibility	OCD	.483	.640*
Harm to self	Anxiety	.326	.093
Personal responsibility	Anxiety	-.142	-.189

*indicates significance at the 0.05 level
**indicates significance at the 0.01 level

TABLE A33: To Show Results of a Pearson Product moment Correlation for the appraisals of personal responsibility and perceived harm to self in the situation of Guilt.

Appraisal Dimension	Group	Likelihood of symptoms in this emotional situation	Likelihood of symptoms in other related emotional situations
Harm to self	OCD	.117	.047
Personal responsibility	OCD	.241	.278
Harm to self	Anxiety	.075	.418
Personal responsibility	Anxiety	-.110	.083

TABLE A34: To Show Results of a Pearson Product moment Correlation for the appraisals of personal responsibility and perceived harm to self in the situation of Anger.

Appraisal Dimension	Group	Likelihood of symptoms in this emotional situation	Likelihood of symptoms in other related emotional situations
Harm to self	OCD	.132	.077
Personal responsibility	OCD	-.268	.429
Harm to self	Anxiety	-.480	-.219
Personal responsibility	Anxiety	-.060	-.535

TABLE A35: To Show Results of a Pearson Product moment Correlation for the appraisals of personal responsibility and perceived harm to self in the situation of Pride.

Details of other Statistical analyses referred to in the text

Emotional Situation	df	F	Sig
Guilt	2	.833	.446
Guilt: when depression was controlled for	2	1.069	.358
Anxiety	2	.307	.738
Anxiety: when depression was controlled for	2	.101	.904

TABLE A35: To Show results of One-way Anova for the appraisal of Situational Control in the Situations of Guilt and Anxiety.

Emotional Situation	df	F	Sig
Guilt	2	.963	.395
Guilt: when depression was controlled for	2	.617	.547
Anxiety	2	2.692	.086
Anxiety: when depression was controlled for	2	2.549	.098

TABLE A36: To Show results of One-way Anova for the appraisal of Perceived Control of Others in the Situations of Guilt and Anxiety.

Emotional Situation	df	F	Sig.
Guilt	2	2.225	.127
Guilt: when depression was controlled for	2	1.961	.161
Anxiety	2	1.451	.252
Anxiety: when depression was controlled for	2	1.793	.187

TABLE A37: To Show results of One-way Anova for the appraisal of Responsibility of Others in the Situations of Guilt and Anxiety.

Details of Missing Data

Anxiety Situation: 1 missing value on appraisal of 'harm to self', in the non-clinical group

2 missing values on appraisal of 'benefit to self', n the non-clinical group

Guilt Situation: No missing values

Anger Situation: 1 missing value on 'benefit to self', in the non-clinical group

2 missing values on 'benefit to others', in the non-clinical group

Pride Situation: 1 missing value on 'benefit to others', in the non-clinical group

1 missing value on 'harm to self', in the non-clinical group