Self-Ambivalence in Obsessive-Compulsive Disorder

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Abstract

According to the cognitive model, Obsessive-compulsive disorder (OCD) is maintained by various belief factors such as an inflated sense of responsibility, perfectionism and an overestimation about the importance of thoughts. Despite much support for this hypothesis, there is a lack of understanding about the role of self-concept in the maintenance or treatment of OCD. Guidano and Liotti (1983) suggest that individuals who are ambivalent about their self-worth, personal morality and lovability use perfectionistic and obsessive compulsive behaviours to continuously restore self-esteem. This thesis develops a model of OCD that integrates self-ambivalence in the cognitive model of OCD.

Specifically, it explored the hypothesis that the OCD symptoms and the belief factors related to the vulnerability of OCD are mechanisms that provide relief from self-ambivalence.   It addressed three questions. First, is self-ambivalence related to OCD symptoms and OCD-related beliefs? Second, to what extent is self-ambivalence specific to OCD, compared to other anxiety disorders? Third, to what extent is self-ambivalence important in accounting for response and relapse of OCD to psychological interventions?   In order to explore these questions, a questionnaire measuring self-ambivalence was first developed and evaluated.

Non clinical and clinical participants were recruited for research. Non-clinical participants (N = 269) comprised undergraduate students (N = 226: mean age = 19.55; *SD* = 3.27) and community controls (N = 43; mean age = 43.78; *SD* = 3.92). Clinical participants (N = 130) included 73 with OCD as the primary diagnosis (mean age = 36.16; *SD* = 11.24) and 50 individuals with another anxiety disorder (mean age = 36.45; *SD* = 11.42). To measure various cognitive, mood and behavioural factors associated with OCD, questionnaires were administered to the participants.

Three studies were conducted. In the first study, a 19-item questionnaire, the Self-Ambivalence Measure (SAM) was developed to measure self-ambivalence. Following

data reduction analyses, a unifactorial solution was found. This factor was stable across the non-clinical and clinical cohorts. Satisfactory psychometric properties were demonstrated, as indicated by reliability and validity indices, including internal consistency, test-retest reliability, content validity, criterion validity, convergent validity and discriminant validity.

The second study examined the associations between self-ambivalence, OCD symptoms, OCD-related beliefs and anxiety disorders. This study found that self-ambivalence related significantly to OCD symptoms and distinguished individuals with OCD from normal controls. However, it found no difference in self-ambivalence between the OCD cohort and anxious controls. Finally, it found that self-ambivalence related significantly to OCD-related beliefs and accounted for a significant portion of their co-variation.

The third study investigated the relationship between self-ambivalence and treatment outcomes in a sample of 51 participants with OCD (mean age = 35.61, SD = 11.96) undergoing 16 weeks of cognitive behavioural treatment (CBT). The participants were assessed before, during, and six months after treatment for changes in self-ambivalence, OCD symptoms and OCD-related beliefs. The study found that improvement in OCD symptoms was associated with an improvement in self-ambivalence. Further, it found that improvement in self-ambivalence during CBT protected against the deterioration of OCD compulsions in the six month period following treatment.

In conclusion, these studies collectively showed that self-ambivalence relates to OCD symptoms, and to the various beliefs implicated in vulnerability for OCD. In integrating self-ambivalence within the cognitive model of OCD, we suggest that self-ambivalence may act with environmental and other developmental influences to render individuals vulnerable to the development of OCD-related beliefs and, hence, OCD. Perfectionism, inflated responsibility and excessive importance placed on controlling thoughts may develop as defences against negative self-perceptions. Self-ambivalence may also be an important vulnerability factor in other anxiety disorders, depending on their idiosyncratic, developmental, experiential and cognitive profiles. Nonetheless, it

appears to account for why some OCD patients have poor treatment outcomes. Patients who are extremely ambivalent about self-worth may be reluctant to relinquish cognitive and behavioural patterns that protect against negative definitions of self. Overall, self-ambivalence is important to the vulnerability for, and treatment of OCD.

Declaration

This is to certify that

the thesis comprises only my original work towards the PhD except where indicated in the Preface,

Due acknowledgment has been made in the text to all other material used,

the thesis is less than 100, 000 words in length, exclusive of tables, maps, bibliographies and appendices.

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Sunil Singh Bhar
July, 2004

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Chapter 1

Introduction

The concept of self is complex and occupies a central role in many psychological theories about human behaviour, emotion, motivation and thinking. Accordingly, the concept of self has been used extensively to explain the mechanisms underlying maladaptive states, such as anxiety, affective and personality disorders. Therapists and researchers alike have advocated a crucial role for the self-concept in the process of therapeutic change. Despite the plethora of theories and empirical attention paid to the self in normal experiences, psychopathology, and psychological treatment, little is understood about its involvement in Obsessive-compulsive disorder (OCD). There is little empirical study of the importance of the self-concept in the development and maintenance of obsessive-compulsive symptoms. The paucity of such research persists despite theoretical suggestions, anecdotal findings and clinical examples that show individuals with obsessional difficulties as conflicted about their core representations of self (reviewed in Guidano, 1987, 1991; Guidano & Liotti, 1983).

1.1   Background To The Research

The claim that obsessionality involves conflicts about self-concept is not recent. Psychodynamic and personality theorists have long argued that obsessive-compulsive symptoms reflect defences against conflicts that threaten a coherent and valued sense of self (Alexander, 1948; Freud, 1909/1987; Malan, 1979; Millon & Davis, 1996). For example, in their description of Obsessive-compulsive personality disorder (OCPD), Millon and Davis proposed that individuals, who are rigid, pedantic or meticulous, are in fact defending against feeling defective, evil or worthless. Further, according to Freud (1909), individuals with obsessional personality traits are conflicted about their representations of self, in that "there being a representation of a conflict between two

opposing impulses of approximately equal strength…between love and hate" (p. 192). Indeed, the idea that maladaptive patterns of behaviour constitute a defence against negative self-images has been employed in various theoretical positions to account for a variety of psychological and interpersonal difficulties including those reflective of personality disorders (Millon & Davis, 1996; Morf & Rhodewalt, 2001).

Guidano and Liotti (1983) apply this reasoning to OCD. They suggest that OCD develops on the basis of ambivalence about one's sense of self-worth and in particular, one's difficulties in establishing a coherent image of one's moral purity and social acceptance. In order to retain a positive self image, Guidano and Liotti propose that individuals with OCD resort to compulsions, perfectionism and excessive scrutiny of repugnant intrusive thoughts.

Conjectures about the role of conflictual self-concept in obsessionality have not been subjected to empirical research. Such neglect may be due to the lack of adequate measures of self-ambivalence, and the failure of researchers to recognise the significance of the relationship between the self-concept and obsessionality. Perhaps the importance of this relationship has been downplayed by the lack of definitional clarity regarding the self-concept.

Further, given that problems with self-concept has been implicated in a wide range of psychological disorders (Swann, 1996) there has been a tendency for researchers and theorists to focus on those vulnerabilities that differentiate between disorders rather than those that form a common vulnerability factor for psychopathology (Coles, Frost, Heimberg, & Rheaume, 2003; Salkovskis et al., 2000). Such research has tended to focus on specific cognitive factors in OCD rather than on broad and higher order notions such as self-concept, self-esteem, self-ambivalence and identity. Consequently, there is a lack of understanding in the empirical literature about how the self-concept informs the emergence of obsessional problems.

Even though self-ambivalence may be relevant to a range of disorders, this does not detract its importance as a vulnerability factor for obsessional problems. It may still

significantly inform some of the behavioural, cognitive and emotional aspects of the disorder. Indeed, amongst the most important cognitive factors for OCD, several non-specific vulnerability factors have been identified (Obsessive-Compulsive Cognitions Working Group, 1997), such as perfectionism, a tendency to overestimate the likelihood of threat and low tolerance for uncertainty. Despite their relationships to several anxiety and depressive disorders in general (Clark, 2002; Shafran & Mansell, 2001), these factors are regarded as important for a comprehensive cognitive formulation (Taylor, 2002) and psychological treatment (Freeston, Rheaume, & Ladouceur, 1996) of OCD . Likewise, self-ambivalence also may constitute a non-specific but important vulnerability factor for OCD. What remains to be seen is whether self-ambivalence is important for OCD, and if so, in what way.

1.2   Research Problem and Hypotheses

This thesis explored the role of self-concept in one type of obsessional experience, OCD. It examined whether obsessive-compulsive symptoms and the beliefs characteristic of OCD, are motivated by the concerns about, and desires to resolve self-ambivalence.

This thesis tested three ideas that emerge from Guidano and Liotti's (1983) theoretical position. First, it explored whether obsessive-compulsive symptoms and OCD-related beliefs are associated with self-ambivalence. In order to test this relationship, the concept of self-ambivalence was operationalised and a questionnaire was developed to measure Guidano and Liotti's definition of self-ambivalence. Correlational analyses and group comparisons were employed to examine the relationship between self-ambivalence and OCD symptoms and related beliefs across clinical and non-clinical populations. Furthermore, the nature of the relationship between self-ambivalence and OCD-related beliefs was explored.

Secondly, this thesis explored the extent to which self-ambivalence was specific to obsessive-compulsive disorder, compared to other anxiety disorders. The level of self-

ambivalence in individuals with OCD was compared to individuals with other anxiety disorder.

Thirdly, the thesis explored the involvement of self-ambivalence in the recovery and relapse processes involved in OCD. Specifically, it explored whether self-ambivalence in individuals with OCD was related to those individuals' response to cognitive-behavioural therapy (CBT). The thesis also examined whether improvements in self-ambivalence in CBT protected against relapse following treatment.

We hypothesised that the severity of obsessive-compulsive symptoms and OCD-related beliefs would be related to self-ambivalence. Individuals with OCD were expected to be significantly more ambivalent about self-concept than non-clinical individuals. However, given the potential for self-ambivalence to constitute a general vulnerability for the development of maladaptive states and cognitions, self-ambivalence was not expected to distinguish those with OCD from other anxiety disorders. Yet, the importance of self-ambivalence to obsessive-compulsive disorder was expected to be demonstrated in its utility to predict treatment response and relapse. The extent to which self-ambivalence was resolved during CBT was expected to relate to the extent to which treatment gains were made and maintained six months following the treatment program.

In summary, this thesis addressed the question: "How important is self-ambivalence in the maintenance and treatment of OCD?". Although self-ambivalence was not expected to distinguish individuals with OCD from those with other anxiety disorders, it was expected to relate to OCD symptoms and related beliefs. Further, we anticipated that the concept of self-ambivalence would serve as a prognostic indicator for relapse, and as an important consideration in individual case formulations of OCD.

1.3   Justification For The Research

OCD is the tenth most disabling condition (World Health Organisation, 1996), the fourth most common psychiatric disorder (Reiser, et al., 1998), and the second most prevalent anxiety disorder after phobic disorders (Regier, Narrow & Rae, 1990).

Approximately 1% to 3% of the population suffer from OCD at any one time, with lifetime and one year prevalence rates estimated at 2.5% and 1.5% - 2.1% respectively (American Psychiatric Association, 2000). The prevalence of obsessionality in the community is significantly higher once OCD "spectrum" conditions, such as OCPD, eating disorders, pathological hoarding and impulse control problems are considered. Obsessional traits such as perfectionism are indeed widespread and implicated within a range of disorders (Shafran & Mansell, 2001). Given the level of disability and distress caused by OCD and related obsessional conditions, it is vital that empirical research explores all possible mechanisms relevant to the maintenance or development of obsessionality. By identifying the cognitive and belief factors involved in the vulnerability and maintenance of OCD, treatment strategies are likely to more precisely intervene and prevent relapse.

Further, the inclusion of self-concept in current psychological theorising about OCD is expected to increase our understanding about the motivations that underlie the seemingly irrational behaviours. By linking compulsions and obsessions to issues that concern the self, psychological theories of OCD are potentially able to make better sense of the maladaptive behaviours and symptoms characteristic of OCD.

1.4   Methodology

Four types of samples were recruited: Undergraduate student volunteers, non-clinical community volunteers, individuals presenting with a primary diagnosis of OCD, and individuals presenting with other anxiety disorders. Three studies were conducted.

The first study developed and evaluated a 19-item measure of self-ambivalence, called the Self-Ambivalence Measure (SAM). Although several questionnaires are available that measure fragility or uncertainty in self-evaluations, they do not address the various aspects that constitute neither self-ambivalence, nor the facets of the self-concept that are said to be important for OCD sufferers. Factor analyses were conducted, followed by numerous correlational analyses to develop the SAM and to test its psychometric properties.

The second study examined the associations between self-ambivalence, OCD symptoms, OCD-related beliefs and anxiety disorders. It also explored the specificity of self-ambivalence to OCD compared to other anxiety disorders. The levels of self-ambivalence in non-clinical, OCD and anxiety controls were compared using analysis of variance (ANOVA). Regression and correlational analyses were performed to examine the associations between self-ambivalence, OCD symptoms and OCD-related beliefs.

The third study explored the extent to which self-ambivalence was associated with treatment gain and maintenance. More specifically, it explored if self-ambivalence predicted recovery and relapse of OCD in CBT. Individuals with OCD were treated using a standardised 16-week CBT program. Measurements of self-ambivalence, OCD symptoms, OCD related beliefs and negative mood were taken before, during and after CBT. Correlational analyses and t-tests were used to explore the predictive utility of self-ambivalence.

1.5 Outline Of The Thesis

The thesis is divided into three sections. The first section (chapters 2 - 6) reviews the literature relevant to the questions addressed in this thesis.

Chapter 2 describes the prevalence, phenomenology and assessment of OCD. It traces the historical origins of the concept of obsessionality and OCD. Further, it highlights the differences between OCD and other disorders related to obsessionality.

Chapter 3 outlines various aetiological formulations of OCD, with an emphasis on the cognitive model. It provides a context and justification for exploring the self in view of specific gaps within the cognitive model.

Chapter 4 reviews Guidano and Liotti's (1983) model of OCD that construes self-ambivalence as central to the vulnerability and maintenance of OCD. Empirical literature in relation to the model is reviewed and an operational definition of self-ambivalence is provided.

Chapter 5 explores the notion of self-concept, in order to provide a context for critically distinguishing self-ambivalence from related concepts such as self-uncertainty, self-esteem and self instability.

Chapter 6 presents a review of the literature on the association between self-concept and psychopathology. This chapter provides a context for delegating self-ambivalence as a general vulnerability factor for a range of personality, anxiety and depressive disorders. It also reviews the behavioural and psychological mechanisms that have been suggested to mediate between self-concept and symptoms of psychopathology.

Section two (chapters 7 - 10) of this thesis describes the three studies that were conducted. Each study is prefaced by a brief introduction followed by its methodology, results and discussion. Chapter 7 introduces the studies.

Chapter 8 (study 1) addresses the development and validation of the SAM. It reviews several questionnaires that measure the self-concept. This chapter provides a rationale for the development of a new measure for self-ambivalence.

Chapter 9 (study 2) investigates the relationships between self-ambivalence, OCD and OCD related beliefs. It tests two models of these relationships. Further, it investigates whether self-ambivalence is specific to OCD compared to other anxiety disorders.

Chapter 10 (study 3) investigates whether self-ambivalence changes with CBT, and whether it is associated with the alleviation of OCD symptoms. Further, it tests whether the resolution of self-ambivalence during CBT protects against the recurrence of OCD symptoms.

The final section of the thesis (chapter 11) provides an overview of the findings and their implication for the phenomenology of OCD, the cognitive model of OCD, the treatment of OCD and for future research on the self-concept in OCD.

1.6   Delimitations of Scope and Key Assumptions

This thesis investigates the association of self-ambivalence to beliefs and symptoms associated with OCD. However, in employing a cross sectional correlational method it does not explicitly assess the issue of causality. It is equally plausible to infer from many of the relationships found, that self-ambivalence is a consequence of OCD instead of, or in addition to its role in promoting the disorder. This thesis focuses on the implications of self-ambivalence occupying a causal role in maintaining and predisposing OCD, consistent with the theoretical positions adopted by Guidano and Liotti (1983), and more generally by cognitive theorists. Indeed the aetiology of OCD is likely to be multifaceted and complex, as will be demonstrated in Chapter 3.

1.7   Terminology

Terminology relating to the self-concept is notoriously imprecise (Baumeister, 1998). Researchers use terms such as self-concept, identity and self-esteem inconsistently to refer to various aspects of the self. Chapter 5 addresses the nuances and theoretical implications associated with these terms and their usage within the wider literature. However, a brief outline is provided here to clarify how these terms have been employed in this thesis.

We use the term self-concept interchangeably with other terms such as identity, self-perception, self-representation, self-construct and self-image to refer to one's personal impression or idea about the self. This impression consists of abstractions one makes about one's personal characteristics (e.g., "I am friendly", "I have blond hair"), as well as specific images about one's attributes in particular contexts, roles of situations (e.g., "I am friendly only with people I know", "I am a hard worker"). The self-concept is regarded as a broad construct which includes personal descriptions (e.g., "I have blue eyes") and evaluations (e.g., "I am worthwhile") about the self (Campbell et al., 1996). We deliberately use the term self-concept to refer to both descriptive and evaluative aspects of the self. When emphasising the distinction between descriptive and

evaluative impressions of self, we employ terms such as self-description, and self-evaluation. In this thesis, self-esteem is used to refer to personal feelings and beliefs about self-worth – that is the extent to which one positively regards oneself. These evaluations can be held about personal "domains" – that is, certain personal features or roles (e.g., our morality, intellect, creativity, student, worker) – or more "globally" across such divisions.

1.8   Summary

This chapter laid the foundations for the thesis. It introduced the research problem and research questions and hypotheses. Justification for the research was subsequently outlined and the methodology was briefly described. Each of the chapters was then briefly described, and the aims of each study were noted. Finally, an important limitation of this research studies was explicated, and terminology was defined.

Chapter 2

Obsessive-Compulsive Disorder: Phenomenology

To determine how self-ambivalence can contribute to our understanding of the dynamics maintaining OCD, it is important to first outline the main features of the disorder.

This chapter reviews definitions of obsessionality before presenting the criteria for OCD. It then describes the diagnosis of OCD as explicated in Diagnostic and Statistical Manual, 4th Edition (DSM-IV, American Psychiatric Association, 1994 [APA, 1994]) and The International Classification of Diseases, 10th Edition ICD-10 (ICD-10, World Health Organization, 1992 [WHO, 1992]). The major differences between DSM-IV and ICD-10 diagnosis of OCD are highlighted. Following from this comparison, the chapter describes in detail the phenomenology of obsessions and compulsions, and the common symptom profiles and subtypes associated with the disorder. Fourth, the epidemiology of OCD and disability associated with the disorder are presented. Fifth, in order to further define OCD as distinct to other disorders that have obsessional components, this chapter considers some of the major differences between OCD and other anxiety and mood disorders. Finally this chapter considers OCD phenomena from a dimensional perspective. This chapter provides a context for critically appraising the involvement of self-ambivalence in certain phenomenology associated with OCD.

2.1   Obsessionality

Obsessionality has been defined as "the besetting or dominating action or influence of a persistent feeling, idea, or the like, which a person cannot escape" (Delbridge, Bernard, Blair, Peters, & Butler, 1991 p. 1228). The term is translated from the Latin verb "obsidere' ("to sit down upon", besiege), which originally was used to describe conquests of military targets and the invasion of evil spirits (Delbridge et al., 1991; Jakes, 1996; Reed, 1985).

Current usage of terms such as "obsessive" and "compulsive" refer pejoratively to behaviour or thinking that appears indulgent or excessive. An individual is described as obsessional if he or she spends a disproportionate amount of time, interest or effort on some behaviour, object or thought, to the detriment of other important areas of functioning. As observed by one writer, the lay use of these terms often reflects the observer's personal judgment about the worth of such pursuits or efforts, rather than the pathological qualities of the behaviour itself (Reed, 1985).

Terms such as obsessionality and compulsivity gained their psychiatric implications in the mid nineteenth century in France and Germany (Berrios, 1996). Early theorists described obsessionality as involving involuntary intrusive thoughts. For example, Esquirol (1838) described a patient suffering from thoughts that were "involuntary", "irresistible' and felt not to "be her's" (cited in Berrios, 1996p. 143). Likewise, Westphal (1877) referred to "ideas which come to consciousness in spite of, and contrary to the will of the patient − ideas which he (sic) is unable to suppress, although he (sic) recognizes them to be abnormal and not characteristic of himself (sic)" (cited in Black, 1974, p. 20).

By the late nineteenth century, the description of obsessionality broadened to include personality features, affective experience and behaviours. For example, Ball (1892, in Berrios, 1996)emphasised that obsessional patients were insightful and had an absence of cognitive impairment, but suffered from frequent somatic and anxiety symptoms, which were alleviated by compulsive actions. French psychiatrist Janet (1903, Berrios, 1996) who is credited with delineating obsessionality as a syndrome, also highlighted the personality features of the person with the disorder, including general weariness, lack of perseverance, indecision, checking, hesitancy and the tendency for introspection and depersonalisation.

Thus, obsessionality has been recognised as a psychiatric syndrome for more than 300 years. Early descriptions focused on different aspects of the disorder reflecting the prevailing culture of observers. French phenomenologists such as Janet and Ribot

emphasised the importance of doubt and loss of will, while German psychiatrists such as Westphal, focussed on the irrational nature of the thoughts (Okasha, Saad, Khalil, Dawla, & Yehia, 1994). Both of these aspects are now appreciated as common experiences of OCD sufferers.

Within present diagnostic nomenclature, many psychological disorders include behavioural patterns that can be considered obsessional. For example, several disorders are associated with intrusive thoughts (e.g., Post Traumatic Stress Disorder, Generalised Anxiety Disorder), repetitive behaviours (e.g., Anorexia nervosa, Autistic Disorder) and excessive preoccupations (e.g., hypochondriasis, Social Phobia). To what extent then is OCD different from these disorders? Further, in what way is obsessional personality - more formally known as Obsessive Compulsive Personality Disorder (OCPD) - related to OCD? The next sections in this chapter outline the phenomenology of OCD, and the difference between OCD and these other disorders.

2.2   *Obsessive-Compulsive Disorder (OCD)*

The essential features of OCD are recurrent obsessions or compulsions (American Psychiatric Association, 1994; World Health Organization, 1992). Obsessions are intrusive, repetitive and persistent thoughts, images or impulses. Compulsions are behaviours or rituals that are performed in order to prevent harm or to alleviate distress.

Apart from the presence of obsessions or compulsions, the diagnosis of OCD is predicated on the impairment and distress caused by the symptoms, the aetiological basis of the symptoms and to some extent, the presence of insight. For instance, the diagnosis of OCD is applicable only when the obsessions or compulsions cause marked distress, take more than one hour a day, or significantly interfere with the person's normal routine, occupation, academic functioning, usual social activities or relationships (American Psychiatric Association, 1994). The diagnosis of OCD is not applicable if the symptoms are due to the direct physiological effects of a substance or general medical condition, or are restricted to another Axis 1 disorder that is present (American Psychiatric Association, 1994). Finally, for adults, the diagnosis of OCD is relevant

only for individuals who recognise that the obsessions and compulsions are excessive or unreasonable (American Psychiatric Association, 1994).

The ICD-10 and DSM-IV definitions for OCD are similar. Indeed the DSM-IV was developed in order to ensure that its criteria for mental disorders were compatible with those in ICD-10 (First & Pincus, 1999). This compatibility is reflected in the appearance of ICD-10 codes alongside DSM-IV disorders in the international version of DSM-IV. Accordingly, research has found a moderate to high level of cross-system diagnostic concordance for OCD (64%) and for many other affective and anxiety disorders (Andrews, Slade, & Peters, 1999).

There are two differences between DSM-IV and the ICD-10 with regards to the classification of OCD (see Appendix A for ICD-10 criteria for OCD). First, the ICD-10 coding system explicitly recognises three OCD subtypes. For example, specific ICD-10 codes refer to subtypes such as Predominantly Obsessional Thoughts or Ruminations (F42.0), Predominantly Compulsive Acts (F42.1) and Mixed Obsessional Thoughts and Acts (F42.2). In the DSM-IV system, even though the diagnosis of OCD does not require the individuals to suffer from both compulsions and obsessions, there is no formal way to characterise the predominance of obsessions or compulsions in an individual's symptom profile.

Second, ICD-10 and DSM-IV differ in their emphasis on the importance of resistance for the diagnosis of OCD. In ICD-10, OCD is diagnosed if the patient shows resistance to both obsessions and compulsions. In DSM-IV, OCD is diagnosed even if the person does not resists compulsions. Thus, in DSM-IV, the diagnosis of OCD requires resistance only to obsessions (Andrews et al., 1999). If this requirement was included in the DSM-IV definition of OCD, the concordance for OCD between ICD-10 and DSM-IV would increase from 64% to 76% (Andrews et al., 1999).

There is some evidence to suggest that the DSM-IV definition of OCD with regards to resistance is more accurate. Researchers have found that most patients with OCD do not attempt to combat their compulsions (Catapano, Sperandeo, Perris, Lanzaro, & Maj,

2001; Lelliot, Noshirvani, Basoglu, Marks, & Montiero, 1988). Further, researchers have found that resistance against compulsions correlates negatively with the severity of OCD (Catapano et al., 2001). Some research also has suggested that resistance is low amongst OCD sufferers who possess poor insight about their symptoms (Catapano et al., 2001) or who present with hoarding compulsions (Damecour & Charron, 1998). Given that resistance against compulsions varies with the chronicity and type of OCD and with patient insight, resistance can be absent despite a definite diagnosis of OCD.

Given the similarity between ICD-10 and DSM-IV in their descriptions of OCD, the choice to use one classification system over the other for the diagnosis of OCD is arbitrary, and reflects national and cultural preferences and practices (Farmer & McGuffin, 1999). In this thesis, the DSM-IV definition of OCD is employed for two reasons. First, the DSM-IV is currently the official psychiatric coding system in Australia. Second, the DSM-IV system is seen by many researches as based on more rigorous research on phenomenology, than is ICD-10, and has become the de facto classification system for research (First & Pincus, 1999). Accordingly, DSM-IV appears to be the more popular classification guide for mental health professionals (Andrews et al., 1999).

The description of OCD in DSM-IV has remained relatively constant across the various editions of DSM (see Appendix B). Succeeding editions of DSM have made minor revisions to the way obsessions and compulsions are defined, in the increased emphasis on the interrelationships between obsessions, compulsions and anxiety and in the shift of focus away from insight as being constant in OCD. However, despite such revisions, it is apparent that the essential features of OCD have remained remarkably unchanged. Reed (1985) maintains that "clearly there have been no radical changes in the definition of obsessions since Westphal's time" (p. 4).

Since Westphal's description of OCD, persons with OCD have consistently been portrayed as having two opposing experiences of their symptoms. On the one hand the sufferer is construed as trapped by senseless and disruptive thoughts, which serves to raise levels of arousal, and distress. On the other hand, the person is also described as

goal oriented in carrying out purposeful rituals in order to gain relief from obsessional distress and to control outcomes. DSM descriptions of OCD have included both essential qualities of the experience: an oscillating sense of being besieged by intrusions followed by defences against distress and further intrusive experiences. The next sections outline the essential features of obsessions and compulsions.

2.2.1   Obsessions

Obsessions are "recurrent and persistent thoughts, impulses or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and cause marked anxiety and distress" (American Psychiatric Association, 1994, p. 422). This intrusive and inappropriate quality of the obsession has been referred to as "ego dystonic". The individual interprets the content of the intrusion as alien, not within his or her control and "not the kind of thought that he or she would expect to have" (American Psychiatric Association, 1994, p. 418). The thoughts, impulses or images are not simply excessive worries about real-life problems. They are recognised by the individual as products of his or her own mind rather than the product of some external entity or force (cf., delusions of passivity). The sufferer typically attempts to ignore or suppress these intrusions or to neutralise them with some other thought or action.

In OCD, these obsessions are typically about repugnant, aggressive or catastrophic events. The most common obsessions are repeated thoughts about contamination, repeated doubts about having made a mistake or being careless, a need to have things in a particular order, aggressive or horrific impulses, and sexual imagery (American Psychiatric Association, 1994)(Appendix C).

Individuals with OCD have multiple obsessions. (Akhtar, Wig, Verma, Pershod, & Verma, 1975; Rasmussen & Tsuang, 1986). Reed (1985) summarises his clinical observations saying "obsessionals seldom suffer from a single, discrete obsession" but have a "veritable network of obsessional ideas, doubts and fears" just as a "cancer which can extend in all directions" (p. 24).

There are various ways in which obsessions are experienced. DSM-IV restricts the definition of obsession to a thought, image or impulse. However, researchers have employed a wider range of constructs such as fears and conviction in defining obsessions. For instance, Girishchandra and Khanna (2001) reported an array of obsessional phenomena in their sample of OCD participants, including doubts, thoughts, fears, urges, images and convictions. Akthar et al. (1975) reported that among 82 Hindu obsessional patients in Northern India, 75% reported doubts, 34% thoughts, 25% fears, 17% impulses, and 7% images. Reed (1985) found that in his sample of 50 non-depressed OCD patients, 65% complained of fears, 40% of rumination and 38% of doubts.

2.2.2 Compulsions

According to DSM-IV (American Psychiatric Association, 1994), compulsions are repetitive and ritualistic behaviours or mental acts that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly. The most common compulsions involve washing and cleaning, counting, checking, requesting or demanding assurances, repeating actions, and ordering (see Appendix C). Further, in a review of 65 studies within the behavioural treatment literature, 75% of OCD treatment population was found to have cleaning or checking compulsions (Ball, Baer, & Otto, 1996). In the DSM-IV field trial, the least common primary compulsions were hoarding, arranging and counting (Foa et al., 1995). In this trial, nearly 80% of OCD sufferers presented with mental compulsions, although less than 11% rated such compulsions as the most distressing (Foa et al., 1995).

Nearly half of OCD sufferers suffer from more than one ritual. Rasmussen and Tsuang (1986) found that 41% of their OCD sample exhibited more than one ritual. Reed (1985) found that two thirds of his sample of 36 OCD patients suffered from more than one compulsion, with each patient having an average of 2.3 rituals.

Compulsions are conducted generally in order to prevent a dreaded event or situation, or to alleviate distress, but they are either not connected in a realistic way with what they

are designed to neutralise or prevent, or are clearly excessive (American Psychiatric Association, 1994). Further, compulsions are never performed for pleasure (American Psychiatric Association, 1994).

2.2.3   The Distinction Between Obsessions and Compulsions

The complimentary roles of obsessions and compulsions have long been clearly recognised, particularly with regards to personal morality. Early theorists observed that obsessions were experienced as transgressions or threats to moral boundaries. For example Janet (1903, in Reed, 1985) noted that sufferers of OCD feared the eventual dominance of personal wickedness over personal virtue. Compulsions such as praying, checking or ruminating are conducted in order to avoid or compensate for these transgressions. Reed emphasises that compulsions are never performed to cause harm to self or others, but rather to deter negative consequences. As noted by another author,

> If urges are relatively harmless like checking, washing or similar rituals, the patients normally give in. If they are dangerous like murderous impulses, urges to attack people, set fire to things, etc., the patients oppose them successfully (Anderson, 1964).

These authors portray obsessions as threats to personal standards of morality, religious beliefs or social norms, and compulsions as strategies to avoid or compensate for these transgressions. In relation to the self-ambivalence theory of OCD (Guidano & Liotti, 1983) these observations are particularly relevant as they suggest that individuals with OCD are preoccupied with conflicting self-representations about their morality or self-worth. The involvement of obsessions and compulsions on self-representations will be addressed in chapter 4.

Despite the complimentary roles of obsessions and compulsions in their relationship to distress and morality, the diagnosis of OCD does not require that both phenomena be present (American Psychiatric Association, 1994). For example, individuals may perform rigid or stereotyped acts according to idiosyncratically elaborated rules without

being able to indicate why they are doing them. Conversely, individuals may experience distressing obsessions about being gay or perverted, without reporting elaborate rituals or obvious compulsions. In fact, as found by several factor analytic studies, sexual and religious obsessions do not always present with compulsions (Baer, 1994; Feinstein, Fallon, Petkova, & Liebowitz, 2003).

However, the independence of obsessions from compulsions remains a contentious definitional issue in the literature. The contention arises because of the blurry boundary between compulsions and other subjective forms of resistance, and between obsessions and compulsive impulses. By definition, obsessions are mental phenomena that are resisted. As described by DSM-IV, resistance to such phenomena may take the form of (a) ignoring (b) suppressing or (c) neutralising with other thought or action. However, these actions would typically also meet criteria for mental compulsions. Thus, it can be argued that obsessions are often defined by virtue of there being compulsions.

Conversely, if compulsions are often enacted following a subjective impulse, and such an impulse meets criteria for obsessions, then it would be rare for compulsions to exist independent from a background of obsessive features. As stated in the DSM-IV field trial of OCD (Foa et al., 1995), "the concept of mental rituals is introduced through the definition of obsessions" (p. 91). Goodman and Price (1998) elaborate on the difficulties in defining compulsions independent of obsessional needs or urges:

> …if a patient describes that hours are wasted aligning or symmetrically arranging objects in the immediate environment, the patient has a compulsion; but does this constitute also an obsession? One can infer that this "obsession" is a need for symmetry, but is this merely a construct invented by the clinician to explain the patient's senseless behaviours? At present there is no unequivocal answer to this issue (p. 101).

Given the confusion in the definitional independence of obsessions and compulsions, it is understandable that there is considerable range in the reported estimates about the

number of OCD sufferers who present with obsessions only or compulsions only. For example, one study reported that only approximately 5% of OCD sufferers present with both obsessions and compulsions. (Karno, Golding, Sorenson, & Burnam, 1988). This estimate starkly contrasts with those from other studies that report between 82 and 91% concordance between obsessions and compulsions (Foa et al., 1995) (Rasmussen & Tsuang, 1986). For instance, Rasmussen and Tsuang found that 83% of patients with contamination obsessions had cleaning rituals, while 82% of patients with aggressive obsessions had checking rituals.

2.2.4 OCD Subtypes

Sub-typing OCD has remained an important goal in the literature, given the increasing interest in whether natural groupings of symptoms occur, the treatment implications, and the neurobiological and cognitive profiles associated with different presentations of OCD (McKay et al., in press). For example, treatment studies have found that patients with certain types of OCD symptoms (e.g., hoarding symptoms) do not respond well to pharmacotherapy (Mataix-Cols, Rauch, Manzo, Jenike, & Baer, 1999) or to behaviour therapy (Mataix-Cols, Marks, Greist, Kobak, & Baer, 2002). Studies have suggested that different parts of the brain may be involved in different manifestations of OCD. For example some researchers have found that patients with cleaning and washing concerns have more frontal brain involvement than other OCD patients (reviewed in Feinstein et al., 2003).

Traditionally, OCD sufferers have been classified according to their presenting phenomenology. For example, individuals have been separated on the basis of whether or not they experience obsessions or compulsions (World Health Organization, 1992), and on the types of compulsions and obsessions (washer, checker, sexual thoughts, and contamination) (Steketee, Grayson, & Foa, 1985).

At least two problems exist with such traditional classifications. First, classifying individuals according to whether they have obsessions or compulsions fails to acknowledge that nearly all OCD patients suffer from both obsessions and compulsions

and that the absence of behavioural rituals does not imply that mental compulsions are also absent (Foa & Kozak, 1985). Conventionally, the categorisation of patients as "obsessional" or "compulsives" is predicated on the basis of the primary or most distressing symptom, rather than because one symptom is completely absent from the syndrome profile (World Health Organization, 1992). When patients are asked whether they are distressed mainly by obsessions, compulsions or both, between 49.3% and 59.4% complain of both, between 29.6% and 37.6% complain predominantly of obsessions, and between 3% and 21.1% complain predominantly of compulsions (Foa & Kozak, 1985; Girishchandra & Khanna, 2001).

Second, symptom based classifications do not easily account for the presence of networks of obsessional themes, nor the occurrence of multiple obsessions and compulsions, some of which may not be obvious to the clinician or researcher (Reed, 1985). OCD sufferers often present with more than one form of ritual, and the phenomenology of OCD often changes over time (Rasmussen & Tsuang, 1986). For instance, a patient classified as a "checker" may later present with washing compulsions.

In response to these limitations, other sub-typing frameworks have been forwarded to account for heterogeneity in OCD (reviewed in McKay et al., in press). For example, OCD has been subtyped on the basis of co-morbid disorders (Nestadt et al., 2003; Tuekel, Polat, Oezdemir, Aksuet, & Tuerksoy, 2002), whether symptoms are triggered by external or internal stimuli (Lee & Kwon, 2003), and differences in age at onset of OCD (Minichiello, Baer, Jenike, & Holland, 1990).

One system has identified subtypes of OCD based on statistical clustering methods (Khanna, Kaliaperumal, & Channabasavanna, 1990). Using statistical clustering procedures, researchers have found that OCD sufferers commonly have obsessions and compulsions that are thematically consistent with each other. For example, many studies have found that washing/cleaning compulsions appear together with contamination obsessions, and that ordering and arranging compulsions appear with symmetry obsessions (Calamari et al., 2004; Summerfeldt, Richter, Antony, & Swinson, 1999).

Four thematic subgroups have often been found across statistical sub-typing studies: a contamination/washing subgroup, a harming/checking subgroup, a hoarding subgroup and a symmetry/ordering subgroup (Calamari et al., 2004).

However, substantial inconsistencies have also been observed in the statistically derived subgroups identified across studies. Between three (Baer, 1994) and seven (Calamari et al., 2004) subgroups have been identified in the literature. Further, differences have been found in the nature of these subgroups. For example, some studies have found that contamination fears and harming impulses appear as separate factors (Calamari, Wiegartz, & Janeck, 1999; Summerfeldt et al., 1999). Other studies have found that contamination and cleaning/washing compulsions cluster together with aggressive obsessions and checking compulsions (Baer, 1994; Feinstein et al., 2003). In their review of the literature, Feinstein and colleagues (Feinstein et al., 2003) suggest that checking compulsions and aggressive obsessions are most variable in terms of how they cluster with other symptoms. Differences in the number and type of subgroups across studies most likely reflect methodological inconsistencies such as variability in sample sizes, differences in analytical strategies, and the use of different OCD symptom measures (Calamari et al., 2004). Consequently, there is currently no generally accepted OCD subtype typology (Summerfeldt et al., 1999).

A further approach has been to subtype OCD on the basis of underlying motivational factors that cut across different symptoms. Drawing on the work of Janet (1903 in Pitman, 1987) Rasmussen and Eisen (1992a) identified distinct subgroups of OCD based on core motivational properties, such as the reduction of risk, the achievement of precision and resolution of doubts. Building further upon this framework, Summerfeldt and colleges (Summerfeldt, Richter, Antony, & Swinson, 2000) speculated that there exists two orthogonal core dimensions in OCD: (a) "harm avoidance", characterized by anticipatory anxiety and the exaggerated perception and avoidance of harm, and (b) "incompleteness" – the need to correct feelings of incompleteness and to achieve a flawless and perfect state. They suggested that, in combination, these dimensions were present in all manifestations of OCD and were associated with different features, vulnerabilities, and causal factors. In partial support of this model, they found that

predominance of the incompleteness dimension predicted greater prevalence of OCD spectrum conditions, higher levels of obsessional personality traits (e.g., perfectionism) and cognitive features such as indecisiveness.

2.2.5   Prevalence of OCD

OCD was once regarded as relatively rare in the general community. Prevalence rates were estimated to be between 0.03% and 0.06% (Rudin, 1953; Templer, 1972). Since the publication of the USA National Epidemiological Catchment Area surveys (Robins & Regier, 1991) and the British National Survey of Psychiatric Morbidity (see Jenkins et al., 1997), OCD is known to be at least 50 times more prevalent than originally believed.

Recent community studies have estimated OCD to be associated with a lifetime prevalence between 1.9% and 3.1%, and a 1-year prevalence of between 0.5% and 2.1% in adults (American Psychiatric Association, 2000)[1]. The six-month point prevalence of OCD is between 0.7% and 2.1% (Bebbington, 1998; Robins, Helzer, Weissman, & et al., 1984). Epidemiological studies have shown that between 1% and 2% of the general population suffers from OCD at any given time (Karno et al., 1988). These prevalence estimates make OCD the fourth most common psychiatric disorder in the United States after phobias, substance abuse and major depressive disorder and twice as common as schizophrenia and panic disorder (Karno et al., 1988).

In Australia, a national survey of the mental wellbeing of adults in Australia was conducted from May to August 1997 (Australian Bureau of Statistics, 1998). This survey included approximately 10, 600 people aged 18 years or above, and provided information on the prevalence of a range of major mental disorders in Australia, such as OCD, major depressive disorder and alcohol abuse. OCD was found to be rare, being associated with a one-year prevalence of 0.4%. In the 12 months prior to the survey, the

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[1] Community studies of children and adolescents have estimated a lifetime prevalence of 1% - 2.3% and a 1-year prevalence of 0.7% (APA, 2000).

prevalence of OCD was less common than GAD, Post-Traumatic Stress Disorder, Panic Disorder and Agoraphobia. Thus, the 1-year prevalence of OCD in Australia is lower than found in the US or British studies, although methodological differences in the surveys are likely to account for such differences.

2.2.6   Course of OCD

OCD usually begins in adolescence or early adulthood, and for the most part, onset is gradual (Rasmussen & Tsuang, 1986). Rasmussen and Tsuang (1986) found that 8% of OCD sufferers have acute onset OCD. Although for the majority of sufferers, OCD begins in adolescence or early adulthood, it is often only reported in the 25 - 40 year old age group (Feinstein et al., 2003). Thus, the onset of OCD symptoms itself may be considerably earlier than the clinical disorder. For example, one study found that the mean age for symptom onset was 11.8 for males and 12.7 for females (Sobin et al., 1999). Onset of OCD after the age of 45 is rare (Black, 1974; Rachman & Hodgson, 1980). In one study, only 3 out of 40 OCD patients experienced the onset of symptoms after the age of 35 (Rasmussen & Tsuang, 1986).

The majority of OCD sufferers have a chronic waxing and waning course, with exacerbation of symptoms often related to stressors such as the birth of a child, promotion to a new job, or the death of a family member (American Psychiatric Association, 1994; Rasmussen & Tsuang, 1986). About 15% of OCD patients show progressive deterioration in occupational and social functioning, and approximately 5% have an episodic course with minimal or no symptoms between episodes (American Psychiatric Association, 2000). Rasmussen and Tsuang (1986) found that 84% of their OCD sample had a continuous course (incomplete remission between episodes), 14% a chronic unremitting, deteriorating course and 2% an episodic course (no symptoms between episodes).

2.2.7   Demographics Associated With OCD

The prevalence and phenomenology of OCD is similar for male and female adults (Weissman et al., 1994). Males and females are equally at risk for OCD and present with similar types of OCD symptoms (Sobin et al., 1999). Although early studies reported that washing compulsions were overrepresented in females, while checking rituals and symmetry obsessions were more prevalent in males (Akhtar et al., 1975; Rasmussen & Tsuang, 1986; Stern & Cobb, 1978), such gender related differences have not been supported in recent studies (reviewed in Noshirvani, Kasvikis, Marks, Tsakiris, & Monteiro, 1991).

Nevertheless, there are a number of other gender related differences in OCD. First, the onset of OCD appears to be earlier for males than females (Noshirvani et al., 1991). The average age of onset is between 6 and 15 years for males and between 20 and 29 years for females (American Psychiatric Association, 2000). Accordingly, in contrast to adult OCD patients who demonstrate equal gender representation, paediatric clinical OCD patients show a male-to-female ratio of approximately 3:2 (Swedo, Rapoport, Leonard, Lenane, & Cheslow, 1989). Second, it appears there is a gender specific pattern of co-morbidity in OCD, in accordance with gender specific prevalence rates of various disorders. More females with OCD have a history of depression and eating disorders than males, while more males with OCD have a history of substance use disorders, than females (Sobin et al., 1999).

The presentation of OCD in children and adolescents is generally similar to those in adulthood (Swedo et al., 1989). Indeed, the DSM-IV diagnostic criteria are identical, except that children with OCD are not required to have insight into their symptoms. Notable differences however are apparent in help seeking behaviour and the extent to which obsessions are regarded as ego dystonic. Children with OCD do not generally request help and do not regard their symptoms as senseless or ego-dystonic (reviewed in Geller et al., 1998). OCD in older adults has not been subjected to much empirical analysis. However, it appears that older adults tend to show more obsessions concerning morality and washing rituals compared with other types of symptoms (reviewed in Calamari, Janeck, & Deer, 2002).

The impact of culture and society on many aspects of OCD is evident. For example, Okasha et al. (1994) report that the religious nature of upbringing and education in Egypt explains the high prevalence of religious obsessions and repeating rituals in their Egyptian OCD participants, and the high prevalence of sexual preoccupations in female OCD sufferers (Okasha et al., 1994). Likewise, Rasmussen and Tsuang (1986) found that many patients in their OCD sample presented with obsessive thoughts and rituals that were reminiscent of these patients' inordinately strict or orthodox religious upbringing. Despite some cross-cultural differences in the presentation of some symptoms, the basic types and frequencies of obsessive-compulsive symptoms are mostly consistent across cultures (Girishchandra & Khanna, 2001; Okasha et al., 1994).

2.2.8   Comorbidity Associated With OCD

OCD is associated with considerable co-morbidity. More than 60% of patients with OCD present with other psychiatric disorders, or have a lifetime risk for comorbid psychiatric conditions. Sobin and colleagues (1999) found that 84% of their OCD sample had other psychiatric disorders, and that 42% of the sample had at least two other comorbid psychiatric diagnoses. Another study found that two thirds of OCD outpatients presented with psychiatric co-morbid disorders (Okasha et al., 1994). A third report indicated that 57% of OCD outpatients had at least one other axis 1 disorder (Rasmussen & Tsuang, 1986). A fourth study found that 26.5%, 27.5% and 14.3% of OCD patients had one, two and three co-morbid Axis I disorders, respectively (Tuekel et al., 2002).

The most frequently occurring co-morbid disorder in OCD is major depressive disorder (MDD). Studies have reported between 30% and 100% of OCD patients have concurrent diagnosis of, or a history of MDD (Eisen et al., 1999; Okasha et al., 1994; Rasmussen & Tsuang, 1986; Tuekel et al., 2002). The lifetime risk of MDD in OCD is between 67% (Sobin et al., 1999) and 55% (Eisen et al., 1999), while the lifetime risk of other mood disorders (eg. dysthymic disorder) is approximately 17% (Sobin et al., 1999). Another study found that on admission, 30% of patients with OCD met criteria for MDD (Rasmussen & Tsuang, 1986). Studies have shown that MDD normally occurs

after the onset of OCD (Karno et al., 1988; Rasmussen & Eisen, 1989) . For example, one study showed that 38% of 150 hospitalised OCD patients reported depression following OCD onset, with only 11% showing depressed symptoms prior to OCD, and 13% having concurrent onset (Welner, Reich, Robins, Fishman, & Van Doren, 1976). Typically researchers have suggested that depressive symptoms develop as the result of the social and occupational impairment associated with OCD (Steketee, 1993) although other aetiological vulnerabilities have also been considered to account for the high level of co-morbidity between OCD and MDD (Bhar & Kyrios, 1999) .

Anxiety disorders are the next most occurring comorbid conditions in OCD (Sobin et al., 1999). According to a recent cross-national epidemiological study, the lifetime median co-morbidity rate between OCD and another anxiety disorder was 53% (Weissman et al., 1994). Eisen and colleagues (1999) found that the common lifetime co-morbid diagnoses included social phobia (23%), simple phobia (21%) and generalised anxiety disorder (GAD; 20%).   Similarly, Tuekal and colleagues (Tuekel et al., 2002) found the following rates of co-morbid anxiety disorders in 147 OCD patients: simple phobia (17.7%), social phobia (15.6%), GAD (12.2%), panic disorder (9.5%), and Agoraphobia (4.1%).

Depending on the method of assessment, between 3% and 87.5% of patients with OCD have Axis II pathology (reviewed in Crino & Andrews, 1996a). There is considerable inconsistency in the literature regarding the most common co-morbid personality disorders in OCD (see Steketee, 1993). According to some reviewers, cluster C personality disorders, and in particular dependent and avoidant personality disorders, are most prevalent in OCD populations (Baer & Jenike, 1992; Lochner & Stein, 2003). For example, one group of researchers found the following distribution of Axis II diagnoses in a sample of 96 OCD patients: Dependent (18%), Obsessive-Compulsive (14%), Avoidant (14%), Histrionic (13%), Schizotypal (10%), Paranoid (7%), Borderline (5%), Schizoid (3%), Passive-Aggressive (1%), Narcissistic (0%) and Antisocial (0%) (Baer, Jenike, Ricciardi, Holland, & et al., 1990). However, other reviews of Axis II co-morbidity in OCD (eg., Summerfeldt, Huta, & Swinson, 1998)

have found the following rates of Axis II co-morbidity; avoidant (30%), dependent (10-20%), histrionic (5 – 25%) and schizotypal (15%).

More recently, some research has emerged suggesting that certain personality disorders and traits may be highly associated with specific subtypes of OCD patients. For example, one study found greater levels of schizoptypal and dependent traits in patients with compulsive hoarding than patients with non-hoarding OCD symptoms (Frost, Steketee, Williams, & Warren, 2000). Another study found that washers were more likely to have personality disorders than were checkers (Horesh, Dolberg, Kirschenbaum-Aviner, & Kotler, 1997).   Thus, Axis II difficulties may be specific to certain OCD subgroups. However, more research is required to support this hypothesis.

Despite the persisting uncertainty regarding the level and types of Axis II co-morbidity in OCD, some research has focussed on the impact of Axis II pathology on the prognosis and severity of OCD. Some studies have found an association between the presence of cluster A personality disorders (Paranoid, Schizoid, Schizotypal), OCD severity (Baer, Jenike, Black, Treece, & et al., 1992; de Haan et al., 1997) and poor insight (Matsunaga et al., 2002). Some researchers have also found that co-morbid schizoptypal personality traits predicted poor prognosis for OCD patients. For example, over a series of behavioural treatment studies, Jenike and collegues (Jenike, Baer, & Carey, 1986; Minichiello, Baer, & Jenike, 1987) found that significantly fewer OCD patients with co-morbid schizoptypal PD responded to behavioural therapy, compared to OCD patients without the additional Axis II diagnosis of schizoptypal PD. However, other studies have not found the presence of personality disorders to adversely affect treatment outcome (Dreessen, Hoekstra, & Arntz, 1997; Steketee, Chambless, & Tran, 2001). Indeed two studies found changes in personality disorders to follow symptomatic improvement of OCD (McKay, Neziroglu, Todaro, & Yaryura-Tobias, 1996a; Ricciardi, Baer, Jenike, Fischer, & et al., 1992). In summary, although higher levels of axis II features are associated with more severe cases of OCD, research to date remains equivocal about the effects of these features on the prognosis of OCD.

A high rate of co-morbidity has also been found between OCD and obsessive compulsive spectrum conditions such as somatoform disorders, eating disorders and impulse control disorders. Fifty seven percent of OCD patients report at least one co-morbid spectrum condition over the lifespan, with the most common being a pathological nail biting (25%), pathological skin picking (24%), Body dysmorphic phobia (16%), Hypochondriasis (15%), and Anorexia Nervosa (9%) (Bienvenu et al., 2000). Many studies have also found a high rate of co-morbidity between OCD and Tourette's disorder. OCD symptoms occur in between 33% and 89% of patients with Tourette's disorder (Turner, Beidel, & Nathan, 1985).

The high rates of co-morbidity in OCD have prompted suggestions in the literature of a common pathogenetic vulnerability for OCD and related disorders. Several studies have supported hypotheses about there being a shared psychological vulnerability between OCD and other disorders such as depression (e.g.,Bhar & Kyrios, 1999). From a biological perspective, there is also some evidence that these disorders share physiological vulnerabilities such as serotonin imbalances and genetic predispositions (Turner et al., 1985).

2.2.9   *Disability and Quality of Life Associated with OCD*

OCD is ranked as the most disabling anxiety disorder and the tenth most disabling condition across all medical and psychological conditions, after mood disorders, iron deficiency anaemia, falls, alcohol use, chronic obstructive pulmonary disease, congenital abnormalities, osteoarthritis and schizophrenia (World Health Organisation, 1996). The British National Survey of Psychiatric Morbidity (Jenkins et al., 1997), which surveyed approximately 10, 000 people living in the United Kingdom, found there were increased rates of OCD in people who were divorced and separated, in people who were unemployed and economically "inactive", and in one-parent or single person households. Similarly, Sobin et al. (1999) found that 46% of their sample were never married, while 19% were financially supported on disability pensions. Approximately 25% were still living with their family of origin or in an assisted environment. In the same study, the impact of OCD on males was greater than females.

Accordingly, the impact of OCD on relationships is adverse. A high percentage of patients with OCD do not marry. Between 46% - 70% of patients with OCD have been found to be single (Hafner, 1988; Steketee, 1993). This figure is higher than national US norms, which estimate that approximately 75% of people marry (US Bureau of Consensus, 1996). For OCD sufferers who marry, nearly half of patients report experiencing marital distress (Emmelkamp, de Haan, & Hoogduin, 1990) (Riggs, Hiss & Foa, 1992; Kringlen, 1965). The rate of marital discord for individuals with OCD is similar to that reported for major depression (Beach et al., 1991), but significantly higher than the 20% rate reported by agoraphobics (Arrindell et al., 1986 (reviewed in Steketee & Pruyn, 1998)

Another study compared the quality of life of 60 OCD outpatients with patients suffering from depression or diabetes (Koran et al., 1996). This study found that OCD outpatients were worse on instrumental role performance and social functioning than patients with diabetes and the general population. However, quality of life ratings were similar for patients with OCD and depression.

2.3   OCD and Obsessive-Compulsive Personality Disorder (OCPD)

There is has been considerable speculation about the importance of the relationship between OCD and OCPD. Early psychodynamic oriented theorists postulated that the symptoms of OCD developed on the basis of a premorbid obsessive-compulsive personality (see Pitman, 1987). Therefore, despite distinctions made between OCD and OCPD, these disorders were viewed on a continuum, where OCD symptoms were believed to reflect more severe expressions of obsessive-compulsive personality traits. More recently, researchers have argued that OCD and OCPD are unrelated. Proponents of this view argue that although sufferers of OCD can possess OCPD, and vice versa, the overlap is purely coincidental (reviewed in Pollak, 1987b). In support of this view, studies have shown low rates of co-morbidity between OCD and OCPD (Pollak, 1987a). However, recent studies have also shown that some OCD subtypes relate extremely well with some OCPD traits. Such data have reignited speculations about the

interrelationship between OCD and OCPD (Rosen & Tallis, 1995; Tallis, Rosen, & Shafran, 1996). Researchers have proposed that some subtypes of OCD may be conceptualised as expressions of obsessional personality traits (Mavissakalian, Turner, & Michelson, 1985).

Given the range of views regarding the overlap between OCD and OCPD, and the notion that OCPD and OCD share common developmental origins, we first describe the phenomenology of OCPD and aetiological models of OCPD before reviewing the relevant research regarding the relationship between OCD and OCPD.

2.3.1   The Phenomenology of OCPD

Numerous expressions have been used since the mid 1800s to describe the clinical phenomena now termed OCPD. Terms such as compulsive-personality (American Psychiatric Association, 1987), passive-ambivalence syndrome (Millon & Davis, 1996), Type A personality (Sandler & Hazari, 1960), and anancastic personality (World Health Organization, 1992) describe variants of OCPD. The essential features of OCPD, as described in DSM-IV are a lifelong preoccupation with orderliness, perfectionism and mental and interpersonal control (American Psychiatric Association, 1994). Individuals with OCPD attempt to maintain a sense of control through extreme attention to rules, trivial details, procedures and lists to the extent that the major point of the activity is lost. Such individuals are often excessively devoted to work and productivity to the exclusion of leisure activities and friendships. The emphasis is on perfect performance, and therefore, these individuals are reluctant to delegate tasks or to work with others. Such perfectionism and self-imposed high standards can cause significant distress and interference with task completion. Individuals with OCPD are often inflexible about matters of morality, ethics or values, above and beyond the norms of their cultural or religious groups. Further individuals with the disorder may be unable to discard worn-out or worthless objects, even when they have no sentimental values. They are miserly with spending money on others or self, instead, preferring to hoard money for future catastrophes.

The prevalence of OCPD is reported as 1.7%, and is more common in males, married and working individuals (Nestadt et al., 1991). DSM-IV (APA, 1994) cites a prevalence of 1% for OCPD in community samples, and 3% to 10% in mental health clinic presentations.

The diagnosis of OCPD is perhaps best conceptualised as an 'umbrella diagnosis' (Pollak, 1987a, p. 258), which obscures importance differences between patients at varying levels of disturbance and types of maladjustments. Lewis (1936) delineated two types of obsessive-compulsive personality: one characterised by uncertainty, self-doubt and vacillation, the other described as stubborn, inflexible, morose, and irritable. Following Freud (1908/1925), Ingram (1961) described four composite descriptions of individuals with OCPD, each demonstrating one of four dominant obsessional traits: obstinacy, inconclusiveness, orderliness or parsimony. Further, Millon and Davis (1996) identified five adult subtypes of OCPD: (1) the conscientious subtype characterised by a willingness to conform to others' rules and authority, for fear of rejection or failure; (b) the puritanical subtype who is typically austere and punitive, highly controlled and self righteous with severe judgemental attitudes; (c) the bureaucratic subtype who welcomes tradition, formal establishments, and bureaucracy which provide , not only a powerful identification, but also established sets of rules and regulations and firm boundaries to contain feared inner impulses, (d) the parsimonious subtype who is distinguished by a meanness and self-protectiveness that shields from the possibility of loss and defends against the possibility of others recognising their self-perceived inner emptiness, and (e) the bedevilled subtype who constantly experiences a deep internal struggle between the need to comply with the wishes of others and the desire to assert their own interests, leading to chronic feelings of hostility and conflict. The identification of these subtypes may be clinically useful but research has yet to establish their validity.

2.3.2   Models of OCPD

According to early psychodynamic theory, OCD and OCPD were believed to share a common developmental origin (see Pollak, 1987a). Therefore, developmental models of

OCPD are considered below. They provide a historical context for aetiological theories of OCD (see chapter 3).

Psychodynamic theorists emphasised authoritarian parenting as the critical factor in the development of OCPD. Such parenting was described as involving pressures to conform to rigid adult expectations and values, and failures to appropriately support the development of spontaneous expressions of autonomy, initiative and self competence in early childhood years (reviewed in Pollak, 1987a). According to Freudian classical analytical theory, obsessional personality traits were hypothesised to develop because of conflicts in the anal phase of psychosexual development in the second or third year of life (Freud, 1908/1925). Traits such as orderliness, parsimony and obstinacy were hypothesised to emerge because of clashes between the child's wish to freely control anal activity of retention and elimination, and the desires of the child's caretaker for regulation consistent with personal and sociocultural standards of impulse control and cleanliness. As noted by several theorists, in the obsessional adult, this struggle for control continues and is expressed by outward compliance and self-effacing behaviour in relation to perceived authority, coupled with passive-aggressive withholding and defiance (e.g., Millon & Davis, 1996) .

Neo-Freudian theorists such as Erikson (1950/1985) argued against the role of toilet training in the pathogenesis of OCPD. They reconceptualised the anal period as concerned more generally with the acquisition of autonomy, and proposed that the child's experiences with bowel training may be better viewed as one of many factors augmenting struggles for self-regulation and decision making. These theorists proposed that excessive parental control and criticism curtail the development of autonomy. According to this perspective, in retaliation, the child becomes overly invested in issues of self regulation and control of the environment – that is, obsessive compulsive defences against inner feelings of helplessness.

Theorists from a social learning perspective, such as Ingram (1982), Mallinger (1984) and Millon and Davis (1996) emphasised the role of identification and modelling in the emergence of obsessive personality traits. These theorists suggested that in response to

over-controlling parenting, rigid parental expectations and standards, parental domination and intrusiveness, the child models himself or herself after parental expectations by internalising the parental value system of rule, inhibitions, wishes and rigid attitudes, thus creating a spurious sense of security based on a feeling of being beyond criticism and reproach. According to such theorists, the child replaces his or her perceptions of the world as untrustworthy, hostile and unpredictable with irrational convictions in personal omnipotence over self, world and others. For these theorists, this unrelenting attempt at control to ensure an illusory sense of certainty and safety reflects the central unifying factor underlying salient obsessive-compulsive characteristics such as perfectionism, indecisiveness and self-doubt, and intellectuality.

In contrast to dynamic-oriented thinkers who focussed on early attachment experiences as the basis for OCPD, cognitive theorists emphasise the role of cognitive and affective structures, such as schemas, assumptions, information processing strategies and beliefs underlying the obsessive-compulsive personality organisation (Beck & Freeman, 1990). They identify a number of beliefs and cognitive distortions and strategies that characterise obsessive compulsives, including: (1) rigidity in thinking, typically exemplified by dichotomous thinking and the application of inflexible rules (2) a strong belief in correct solutions (3) perfectionistic thinking and setting up unrealistic expectations for self (4) inflated sense of personal responsibility resulting in extremes of worry, morality and scruples and (5) an overestimation of risk, particularly in relation to the experience of emotion, and (6) an insistence of certainty, rules and regulations in order to control for risk and loss.

2.3.3   The Distinction Between OCD and OCPD

OCD and OCPD bear some similarities to one another such as emotional constriction, inconclusiveness, indecisiveness, self-doubt, checking, repetition type activities and low risk taking (Pollak, 1987b). From a psychodynamic perspective, both disorders are believed to reflect common defence mechanisms such as projection, displacement and undoing (Finichel, 1945), the operation of a punitive superego (Goldstein, 1985), and

conflicts between aggressiveness and submissiveness, dirtiness and cleanliness, being bad or good, and being disorderly and orderly (Pollak, 1987b).

Given these purported similarities, OCPD and OCD were viewed on a continuum in terms of depth of pathology from obsessive-compulsive personality traits, to OCPD, to OCD (see Pollak, 1987a). Early theorists believed that OCD symptoms appeared when the defences of the person with an obsessional character were challenged or overwhelmed or when behaviour associated with these defences became too pervasive or deviant (Lewis, 1936; Sandler & Hazari, 1960). Accordingly, some theorists regarded obsessive-compulsive personality as the dominant premorbid personality for OCD (see Pitman, 1984; Rosenberg, 1967b), and that OCD symptoms were an extension or product of the obsessive-compulsive personality style (Shapiro, 1965).

Early work tended to support the view that OCD and compulsive personality traits were related. In 1936, Lewis observed that 36% of parents and siblings of OCD subjects had "obsessional traits". Later, Kringlen (1965) found evidence that overt obsessional traits such as obstinacy, pedantry and parsimony, were prevalent in relatives of patients with OCD. Even more recently, Rasmussen and Tsuang (1986) found that over half of a sample of OCD patients met criteria for OCPD. In a review of seven studies conducted in the 1960s, Black (1974) reported that on average, 71% of OCD sufferers have moderate to marked premorbid OCPD traits. Such studies led to one reviewer concluding that "obsessive compulsive personality is more likely to be associated with obsessive-compulsive disorder than are other personality patterns" (Pollak, 1987b, p. 260).

However, no study has shown that OCPD or the presence of OCPD traits affords a specific or necessary vulnerability for OCD, as some early theorists implied. In fact, a sizable number of OCD patients have been found to lack co-morbid or pre-morbid OCPD traits. For instance, Black (1974) found that up to 36% of OCD patients did not report pre-morbid OCPD traits. Indeed OCPD traits have been associated with a range of psychiatric and psychosomatic conditions, other than OCD (reviewed in Pollak, 1987b). With the exception of one a recent study (Diaferia et al., 1997), research has not

found the diagnosis of OCPD or the presence of compulsive traits to distinguish OCD patients from patients presenting with depressive disorders (Joffe, Swinson, & Regan, 1988) or from other anxiety disorders (Crino & Andrews, 1996b; Frost et al., 2000; Mavissakalian, Hamman, & Jones, 1990; Nestadt et al., 1991; Sciuto, Diaferia, Battaglia, Perna, & et al., 1991).

The close association between OCPD and OCD has been further challenged by recent studies that have found low rates of coexistence between the two disorders. Baer and Jenike (1992) reviewed several empirical studies, and concluded that the majority of patients with OCD across these studies did not have co-morbid OCPD. Similarly other studies found that fewer than 25% of patients with OCD qualified for a diagnosis of OCPD (Baer & Jenike, 1992; Black, Yates, Noyes, Pfohl, & et al., 1989; Joffe et al., 1988; Mavissakalian et al., 1990; Okasha et al., 1994; Steketee, 1993).
In fact, other Axis II disorders are more consistently associated with OCD (Summerfeldt et al., 1998). In short, there is no necessary continuity or relationship between OCPD and OCD.

Commenting on the wide discrepancy in rates of co-morbidity between OCD and OCPD across studies, Steketee (1990) suggests that early research may have incorrectly categorised participants with ego-syntonic compulsive traits as having OCD. Many of these early studies failed to make clear whether the investigators were studying OCD symptoms or OCPD traits (Black, Noyes, Pfohl, Goldstein, & Blum, 1993). Indeed, early psychometric measures of OCPD were poorly discriminated from measures of OCD (e.g., Gibb, Bailey, Best, & Lambirth, 1983).

In DSM-IV and ICD-10, OCD and OCPD are well established as independent diagnoses. While OCD is characterised by ego-dystonic symptoms, OCPD is characterised by ego-syntonic personality traits that are relatively fixed and long standing. In OCD, the individual regards their symptoms, at some point during the disorder, as inappropriate and excessive. He or she reluctantly performs compulsions largely to restore feelings of safety, rather than to achieve a sense of autonomy or pleasure. OCD related intrusions are experienced as unwanted, irrational and

distressing. Conversely, individuals with OCPD do not experience obsessions and compulsions as described in the criteria for OCD. In support of this distinction, Pollak (1979) found that the two conditions were statistically differentiated through factor analysis.

A question remains however as to the extent to which certain subtypes of OCD may overlap with specific constellations of OCPD traits. Clinically, it can be difficult to distinguish OCD patients with low insight about their compulsive behaviours, from those with OCPD. Until more research becomes available regarding the diagnostic boundaries between these patient groups, Rasmussen and Eisen (1992b) have suggested that OCD individuals with low insight could be classified as having OCPD or subthreshold OCD, rather than diagnosable OCD.

Other authors have suggested that some variants of OCD, such as primary slowness, hoarding and symmetry related rituals, may also represent truncated versions of OCPD (Mavissakalian et al., 1985). In a factor analytic study, Baer (1994) found that only one cluster of OCD symptoms – involving symmetry, repeating and counting – was alone associated with OCPD traits. In another study with OCD participants, Tallis and colleagues (Tallis et al., 1996) found that once anxiety and depression were controlled, only the doubting subscale of the MOCI, correlated significantly with OCPD traits, as measured by the Personality Diagnostic Questionnaire (PDQ-R : Hyler & Rieder, 1987). In a third study with a non-clinical sample Rosen and Tallis (1996) found that slowness, doubting and checking related significantly to the OCPD scale of the PDQ-R, after accounting for depression and anxiety. The Washing subscale failed to correlate with the OCPD subscale of PDQ-R, in both the clinical and non-clinical samples, suggesting that washing symptoms may be least connected with OCPD traits. Likewise, a fourth study found that checkers scored significantly higher than washers on several measures of OCPD traits (Gibbs & Oltmanns, 1995).

In attempts to explain these findings, some authors have proposed that OCPD and OCD, despite distinct diagnostic entities share similar psychological features such as perfectionism and an intolerance for uncertainty (Bejerot, Ekselius, & von Knorring,

1998; Gibbs & Oltmanns, 1995). Other authors (Summerfeldt et al., 1998) suggest that OCD and OCPD are both characterised by yearnings for completeness and perfection. These authors submit that OCD subtypes that are motivated by completeness (e.g., checkers) would be expected to show a closer relationship with the OCPD construct than those OCD subtypes which are motivated by harm avoidance (e.g., washers). These conjectures however remain to be further researched.

2.4   Obsessive-Compulsive Spectrum Disorders

A number of other psychiatric and medical disorders are also characterised by phenomena similar to those in OCD, leading to the notion of obsessive-compulsive (OC) spectrum disorders. Disorders have been included in this spectrum for being similar to OCD in terms of their symptom profile, the inability to delay or inhibit repetitive behaviours, neurobiology, aetiology and treatment response (Hollander & Rosen, 2000; Rasmussen, 1994). A broad list of obsessive-compulsive spectrum disorders includes somatoform disorders (body dysmorphic disorder, hypochondriasis), depersonalisation disorder, eating disorders (anorexia nervosa, bulimia nervosa), impulse control disorders (trichotillomania, pathological gambling), paraphillias, multiple tic syndromes (e.g., Tourette's disorder), borderline personality disorder, delusional disorders, neurological conditions (e.g., Sydenham's chorea, Parkinson's disease, epilepsy, autistic disorder), pervasive developmental disorders, and self-harm syndromes such as onychophagia (severe nail biting) and compulsive skin picking (Hollander, 1993). However even this list does not include other disorders that involve intrusive cognitive phenomena such as distressing, intrusive and persistent thoughts found in major depressive disorders, GAD or schizophrenia.

Given the apparent similarity in the symptoms between OCD and these spectrum disorders, and the high rate of co-morbidity between them (Bienvenu et al., 2000; Richter, Summerfeldt, Antony, & Swinson, 2003), researchers have vigorously attempted to delineate the distinction between OCD and these disorders. This endeavour has not been easy, given the heterogeneity of presentations within OCD (Lochner & Stein, 2003). As argued by Jakes (1996), the aspects of OCD that make it distinct from

other disorders are neither common across all cases of OCD, nor singularly sufficient for a diagnosis of OCD.

An important feature that distinguishes the obsessional experiences in OCD from other disorders is the notion of ego-dystonicity. Individuals with OCD often claim that their obsessional fears are irrational and/or incongruent with their personality and/or self-ascribed rules about reality. For example, a mother who sees herself as caring and gentle may fear that she will intentionally harm her child. In depressive disorders, the intrusive phenomena tend to reflect content congruent with negative mood. The depressed patient does not perceive their persistent brooding about unpleasant circumstances as irrational or incongruent with negative mood (American Psychiatric Association, 1994). Similarly, although worry for patients with GAD is intrusive and persistent, it generally reflects real life problems (American Psychiatric Association, 1994). Further, individuals with anorexia nervosa also are more likely to see their concerns around weight gain as more ego-syntonic (Serpell, Livingstone, Neiderman, & Lask, 2002). Individuals with psychotic symptoms such as delusions lack insight about the incongruence between these beliefs and reality (American Psychiatric Association, 1994).

The notion of ego-dystonicity also assists in clarifying the distinction between OCD and hypochondriasis. The definition of hypochondriasis as a "preoccupation with fears of having, or the idea that one has, a serious disease based on the person's misinterpretation of bodily symptoms" (American Psychiatric Association, 1994, p. 465) is comparable to fears of contamination and illness in OCD. The two disorders contain similar types of preoccupations about illness, and are both associated with reassurance seeking behaviour (Fallon, Javitch, Hollander, & Liebowitz, 1991). Researchers have also suggested that the thought of illness in hypochondriasis is comparable to an obsessional idea which intrudes on consciousness and leads to increased anxiety (Warwick & Salkovskis, 1990). However, patients with hypochondriasis typically attempt to justify the seriousness of their illness, and do not attempt to neutralise or resist thoughts about illness. In contrast, patients with OCD strongly deny the validity of their obsessional fears and attempt to ignore or suppress these thoughts.

Just as intrusive recurrent thoughts are found in several disorders, so are the repetitive and ritualistic compulsive behaviours. In OCD, such acts are performed intentionally to remove the feelings of discomfort or dread. In other disorders, such as the impulse control disorders, binge eating disorders and paraphillias, the actions performed are thought to be driven by pleasure and gratification. Indeed, the distinction between "impulsive" and "compulsive" pivots around the extent to which the actions are expected to produce pleasure (American Psychiatric Association, 1994; Hollander & Benzaquen, 1997).

Another feature that sometimes distinguishes compulsive actions in OCD from the repetitive intentional or habitual actions in other disorders is that in OCD, compulsions are usually preceded by an internal trigger – a sense of purpose, obsessions or affective phenomena. Patients with OCD nearly always report a feeling of tension or anxiety, or obsession, which prompt their compulsive reactions. For example, individuals with checking compulsions typically engage in compulsions following doubts about safety or personal responsibility. The habitual behaviours found in impulse control disorders such as trichotillomania and compulsive skin picking can proceed with minimal anxiety and occur habitually rather than as behaviours that are triggered by acute emotional or cognitive states. Further, while both OCD and Tourette's disorder involve repetitive behaviours, the difference between the two disorders is that OCD compulsions are intentional, while Tourette's disorders tics are unintentional and involuntary (Miguel et al., 1995).

One disorder that continues to be depicted as a variant of OCD is anorexia nervosa. Several researchers have suggested that anorexia nervosa should be considered a subtype of OCD, because of its high co-morbidity with OCD, its relationship with features of obsessionality such as perfectionism, rigidity, and need for orderliness, and its phenomenological similarity to OCD (reviewed in Serpell et al., 2002). Rasmussen (1995) paraphrases this literature on the phenomenological similarities between the two disorders:

Anorexia nervosa and OCD have many phenomenological similarities. Preoccupations with fear of gaining weight and of being fat can be seen as obsessions and the accompanying exercise and eating rituals and excessive checking or avoidance of checking weight provide relief of tension and anxiety, similar to compulsions (p. 111).

Despite the similarities between OCD and anorexia nervosa, differences have also been noted. As mentioned, anorexics are more likely to see their symptoms as ego-syntonic and to resist or suppress concerns about weight gain. Further, whereas anorexics focus primarily on food, OCD patients focus on cleanliness, fear of contamination and danger (Hollander & Benzaquen, 1997). Finally, unlike OCD which affects males and females equally, anorexia nervosa is more common in females than in males (American Psychiatric Association, 1994).

In summary, three features distinguish OCD from OCD spectrum disorders: (1) the ego-dystonicity of the obsessions and the associated resistance of the individual towards such intrusions (2) the goal driven nature of compulsions and (3) the internal trigger for compulsions. Despite these diagnostic markers, researchers and clinicians alike have remained open about the common pathogenic pathways between the various spectrum disorders. Conversely, researchers have also remained mindful that OCD itself may not be as homogenous as portrayed in the research literature.

2.5   Non-Clinical Obsessive-Compulsive Phenomena

Despite advances in the phenomenological distinction of OCD from other disorders, and various presentations of OCD subtypes, it is widely accepted that most non-clinical individuals experience obsessions and compulsions that are similar in content and function to those in OCD, but at a reduced level of intensity, frequency and with less associated disability. Thus, much research has used non-patient samples as a means of investigating issues in OCD (see Burns, Formea, Keortge, & Sternberger, 1995).

Since the late 1970s, researchers have found that non-clinical individuals report having distressing intrusive images, doubts or thoughts, and experience compulsions that are phenomenologically similar to individuals with OCD. The first study to establish the occurrence of obsessions in normal populations was conducted by Rachman and de Silva (1978). Although, some differences were found between non-clinical and clinical obsessions (eg., non-clinical obsessions less unacceptable, easier to dismiss, less intense, subjectively less disturbing, less frequent, less ego alien, and less strongly resisted), the important finding of this study was that 80% of the 124 non-clinical subjects experienced intrusive thoughts that were similar in content and structure (eg., thoughts, impulses) to clinical obsessions. This result has been replicated a number of times in other studies (reviewed in Gibbs, 1996). For example, using a larger non-clinical sample (n = 178), Salkovskis and Harrison (1984) found that 84% of their non clinical sample reported having intrusive thoughts or images. Similarly, non-clinicals have also reported engaging in compulsive behaviours in order to remove distress or prevent feared outcomes (Ladouceur et al., 1995; Muris, Harald, & Clavan, 1997).

Collectively, these findings have endorsed a dimensional view of OCD, in which normal individuals experience symptoms of OCD that are qualitatively similar in form, yet less debilitating, intense and persistent. Thus, non-clinical samples have been used as a substitute for clinical samples to investigate factors related to phenomenology, vulnerability, treatment and maintenance of OCD (Bhar & Kyrios, 1999; Freeston, Ladouceur, Thibodeau, & Gagnon, 1991; Frost, Steketee, Cohn, & Griess, 1994; Frost, Sher, & Geen, 1986).

Although non-clinical analogue research has been criticised on the grounds that they have limited generalisabilty to clinical populations, there is also much support for the relevance of non-patient studies in OCD research. Burns and colleagues found similarities between non patients who scored high on a self report measure of OCD, and OCD patients (Burns et al., 1995). Both groups reported higher levels of depression and generalised anxiety symptoms than the non clinicals who scored low on the OCD self report measure. Likewise, Frost and colleagues found that their high scorers were more perfectionistic than low scorers (Frost et al., 1994). Correlational research with non-

patient samples has also corroborated clinical opinions regarding the role of negative mood and cognitive factors in escalating obsessive compulsive symptoms (Edwards & Dickerson, 1987; Freeston, Ladouceur, Thibodeau, & Gagnon, 1992) . Thus, in a review of non-clinical research on OCD, Gibbs (1996, p. 748) concluded that research using non patient samples has played an "integral role in the accumulation of knowledge on obsessional phenomena".

2.6   Summary

This chapter described the phenomenology, epidemiology and course of OCD. It emphasised the difference between OCD and other related psychological disorders, and reviewed the subtypes in OCD. It also framed obsessional phenomena as dimensional rather than categorical. This overview offers a basis from which to develop an understanding of how the phenomenology of OCD may represent conflicting beliefs about the self.

The next chapter outlines several aetiological formulations of OCD, with most emphasis placed on cognitive models of OCD. It then discusses some of the important limitations in these cognitive and behavioural models before justifying the role of self-concept in progressing our understanding of OCD.

Chapter 3

Obsessive-Compulsive Disorder: Aetiological Models

Various models have been forwarded to account for the aetiology of OCD. A diverse range of vulnerability factors have been advocated in OCD, including repressed conflicts, physiological processes, genetic factors, neuropsychological deficits, parenting, dysfunctional rearing practices, maladaptive conditioning, and belief factors. This chapter outlines several theories about the aetiology of OCD before reviewing in detail the cognitive model of OCD. Then, it highlights issues that remain unresolved regarding cognitive mechanisms involved in the maintenance of OCD. We propose that some of these mechanisms may be better understood once we appreciate the role of the self-construct in OCD.

3.1   Aetiological Models of OCD

3.1.1   Janet's Model of OCD

While early theorists speculated that OCD was inflicted by spiritual forces (see Jenike, 1998), Janet (1903) argued that obsessions and compulsions represented the progressed stage of a condition called psychasthenic illness (in Pitman, 1987). According to Janet, the illness is characterised by three sequential stages. The first stage, called the psychasthenic state, forms an underlying predisposition for OCD, and consists of feelings of incompleteness, mental doubts, an inner sense of imperfection and a strong need for uniformity and order. The second stage is characterised by excessive and repetitive operations including ruminations, tics, phobias and anxiety. These symptoms purportedly develop as responses to one's intolerance for uncertainty, and serve to "compensate for an imagined harmful influence" (Pitman, 1987, p. 227). Finally, the third stage – obsessions and compulsions – develop on the basis of these two earlier stages, and represent the "final and most severe stage of the psychasthenic illness" (p. 227).

3.1.2   Psychodynamic Models of OCD

A number of psychodynamic theorists have offered aetiological theories about OCD (Adler, 1964; Freud, 1913; Malan, 1979). This section reviews Freud's account of obsessional neurosis, as an example of the types of explanations adopted by psychodynamic thinkers with regard to OCD. More extensive reviews of the psychodynamic literature on OCD are found in Jakes (1996) and Nagera (1983).

According to Freud (1909/1987), obsessional neurosis develops against a background of superstitious beliefs and cravings for certainty. Freud proposed that individuals with obsessional neurosis overestimate the power of thoughts, feeling and wishes, and demonstrate a predilection for dwelling on unresolvable questions (e.g., Is there life after death?). Freud believed that obsessions and compulsions constituted the patient's defences against unconscious hostile impulses and death wishes towards the patient's parent. For instance, Freud's describes the development of obsessional impulses in one of his patients as

> reactions to a tremendous feeling of rage, which was inaccessible to the patient's consciousness and was directed against some one who had cropped up as an interference with the course of his love (p. 69).

Similarly, Freud viewed compulsions as a defence against unwanted fantasies and impulses. In his case review of the "rat man", Freud noted, that the patient's intrusive thoughts were followed by

> …a *sanction* that is to say, the defensive measure which he was obliged to adopt in order to prevent the phantasy (sic) from being fulfilled…by employing his usual formulas (a *but* accompanied by a gesture of repudiation, and the phrase 'whatever are you thinking of?') (italics and brackets in original, p. 48)

This notion of compulsions as defensive strategies against forbidden ideation continues to be central to current conceptualisations of OCD. Compulsive symptoms of OCD are still viewed as *defences* against some unpleasant experience. For instance, in DSM-IV and ICD-10, compulsions are defined with respect to their role in alleviating or preventing affective distress or feared outcomes (American Psychiatric Association, 1994; World Health Organization, 1992).

However, given the lack of empirical evidence for Freud's postulations about the aetiology of OCD with respect to repressed conflicts, his model has not been regarded as useful for illuminating the origins of OCD. With the exception of some reports (Freud, 1909/1987; Nagera, 1983), psychodynamic therapies have been unsuccessful with OCD (Cawley, 1974). As announced by Malan (1979), in psychodynamic therapy "everything becomes intelligible and the (obsessional) patient becomes conscious of the conflict, but therapeutic results do not ensue" (p. 107). Similarly, in his summary of the treatment outcome literature, Jenike (1998) says

> …OCD is generally believed to be refractory to traditional psychotherapeutic manoeuvres. To our knowledge, there is not a single case report in the modern psychiatric literature of the efficacy of psychodynamic or psychoanalytic psychotherapy alone in OCD. These patients may well benefit in other areas from traditional psychotherapy, but obsessive compulsive symptoms will likely persist (p. 204).

3.1.3 Genetic Accounts of OCD

The evidence for the genetic transmission of OCD is equivocal. On the one hand, some studies have found higher rates of concordance between monozygotic twins than in dizygotic twins, indicating a genetic basis to the disorder (Carey & Gottesman II, 1981). Further, genetics have been implicated in explaining the high comorbidity between OCD and Tourette's Disorder (Alsobrook II & Pauls, 1998; Pauls, 1992). Moreover, support for the role of genetics in OCD has also been found in studies that show high

familial rates for OCD (Lenane et al., 1990; Pauls, Alsobrook, Goodman, Rasmussen, & et al., 1995).

On the other hand, other studies have found no evidence for the genetic transmission of OCD. For example, in an early study, Rosenberg (1967a) found that only two of 547 relatives of 144 obsessionals had OCD. McKeon and Murray (1987) assessed relatives of 50 OCD subjects and the relatives of 50 controls and found no difference in the rates of OCD. Likewise Black and colleagues failed to find increased levels of OCD or OCD symptoms in relatives or parents of OCD probands (Black, Noyes, Goldstein, & Blum, 1992), compared to the relatives of parents of normal controls. Further, Andrews and colleagues (Andrews, Stewart, Allen, & Henderson, 1990) found that there was no current or lifetime concordance for an OCD diagnosis in either MZ or DZ twins.

The different methods used in these studies have contributed to discrepant findings and make comparisons difficult. Moreover, evidence for a specific genetic contribution to OCD is inconclusive, because crucial studies that would strengthen the case for a genetic contribution to OCD are not available (see Rachman & Hodgson, 1980). For example, studies have not investigated the incidence of OCD in monozygotic twins who have been raised apart, or amongst adoptee probands and biological relatives. Thus, it is possible that high rates of concordance in twins and families are due to environmental and rearing practices, rather than genetic influences (see Jakes, 1996).

3.1.4   Rearing Practices and OCD

Does family environment play a significant role in the genesis of OCD? Despite numerous proposals about the pathogenic basis of early family environments in OCD, there is still a lack of clarity about the pathways by which such environments foster OCD. Given that no consistent patterns have been found between parents' or siblings' OCD symptoms (Lenane et al., 1990), researchers have argued that children do not develop OCD from modelling parental behaviours (reviewed in Waters & Barrett, 2000).

Parenting practices characterized by overprotection, over-critical features, lack of emotional warmth and lack of caring have variously been implicated in the development of OCD (Cavedo & Parker, 1994; Rachman & De Silva, 1978). However the empirical basis for these assertions has remained inconclusive. On the one hand, there is evidence that clinical and sub-clinical obsessionals recollect their parents as overly rejecting, protective, emotionally distant (Chambless, Gillis, Tran, & Steketee, 1996; Ehiobuche, 1988; Frost et al., 1994; Hoekstra, Visser, & Emmelkamp, 1989; Turgeon, O'Connor, Marchand, & Freeston, 2002). On the other hand, many studies have failed to find an association between OCD and dysfunctional patterns of parenting. These studies found that participants did not rate their parents as overprotective or less caring, compared to non clinical and clinical controls (reviewed in Vogel, Stiles, & Nordahl, 1997).

Although some parenting behaviours may be relevant to the development of anxiety or depression related disorder, no parenting style has been found to specifically contribute to OCD (Vogel et al., 1997). Patients from many diverse clinical groups such as depression (Vogel et al., 1997), social phobia (Arrindell, Emmelkamp, Brilman, & Monsma, 1983) and transexuality (Parker & Barr, 1982) have all been found to report that their parents were over protective and not caring enough towards them when they were children.

Two unresolved issues remain regarding the empirical study of parenting and psychopathology. First, many of these studies are methodologically limited, in terms of being retrospective and contaminated by the recall biases (reviewed in Gerlsma, Kramer, Scholing, & Emmelkamp, 1994). One study found that psychiatric patients had more adverse recollections of their parent's rearing behaviour, than did their healthy siblings (Gerlsma, Snijders, van Duijn, & Emmelkamp, 1997). This finding suggests that memories of parental rearing style are dominated by rater biases, rather than the parent-child relationship. Therefore, the empirical literature cannot distinguish actual rearing practices from memories as crucial to the aetiology of OCD.

Second, despite some support for a non-specific relationship between certain types of parenting styles and psychopathology, there is still poor understanding about how these

styles contribute to the development of anxiety or depression disorders (Barrett, Rapee, Dadds, & Ryan, 1996). Do overprotective parents promote a sense of distrust of the environment in their children (Turner et al., 2003; Rachman, 1976)? Do children with anxious temperaments elicit more overprotection from their parents (Turgeon et al., 2002); or is the reciprocity in the relationship pathogenic (Emmelkamp, Kloek, & Blaauw, 1992; Steketee, 1993)?

Empirical studies have yet to appreciate the potential role of early attachment experiences and internal representations of self and caregiver in the genesis of obsessionality and anxiety states. Guidano and Liotti (1983) offer a developmental theory of OCD that remains to be tested empirically. They propose that individuals who experience confusing and ambivalent patterns of attachments with their parents, grow up with the risk for obsessional illnesses. According to their theory, ambivalent attachment is characterised by insecure relational experiences, where the child is not certain of whether he or she is wanted or loved. Children in such attachment contexts experience both validation and rejection, from one or both parents, and find it difficult to consolidate these opposing feelings. Consequently, they develop an insecure base for self-worth and they ruminate about their relational position to others. Perfectionism, compulsive behaviours and approval seeking emerge as a means of securing and unifying their self and interpersonal structures. Existing measures of parenting fail to assess the parenting style characterised by concurrent validation and rejection (Kyrios, Hordern, & Bhar, 2001). Hence, Guidano and Liotti's hypothesis regarding the association between ambivalent parenting and OCD have not been tested due to measurement limitations.

3.1.5   Biological Models of OCD

According to biological models of OCD, symptoms occur because of dysfunctions in neurochemistry, neuroanatomy and/or neurofunctioning. Despite the availability of several imaging techniques, there remains considerable disagreement in the field about the putative biological mechanisms involved in the aetiology of OCD.

For example, some researchers have suggested that OCD emerges from a lack of serotonin (Yaryura-Tobias, 1977; Yaryura-Tobias, Bebirian, Neziroglu, & Bhagavan, 1977). However, more recently, researchers have suggested that OCD is associated with increased serotonergic responsiveness (Tallis, 1995). Support for both hypotheses has been drawn from pharmacotherapy outcome studies showing that OCD symptoms reduce following treatment with serotonin reuptake inhibitors (Tallis, 1995). In addition, there is also emerging evidence that compared to other neurotransmitters, serotonin may not play as an important role in OCD (Jenike et al., 1990a; Jenike et al., 1990b).

There have also been disagreements in the literature about the role of brain structure in OCD. Early studies suggested that the structural brain abnormality underlying obsessive compulsive symptoms was confined to basal ganglia structures. Using imaging technology, these studies reported lesions and atrophies in the basal ganglia structures (including the caudate nucleus) of patients with compulsive behaviours (Hoehn-Saric & Greenberg, 1997). For instance, two studies used computed tomography (CT) to show that the head of the caudate nucleus was smaller in OCD patients compared to controls (Luxenberg et al., 1988; Robinson et al., 1995). However, other studies showed that the structural brain abnormalities in OCD were more widely distributed than previously thought. For example, using Magnetic Resonance Imaging (MRI), Garber and colleagues found abnormalities in frontal white matter, implicating frontal lobe and anterior cingulate involvement in OCD symptoms (Garber, Ananth, Chiu, Griswold, & Oldendorf, 1989). Despite some support for abnormal brain structure in patients with OCD, approximately 40% of controlled studies using CT or MRI have failed to find such difference between OCD subjects and controls (Cottraux & Gerard, 1998). This level of inconsistency in the literature has thus challenged the view that OCD necessarily involves anomalies in brain anatomy.

Apart from structural problems, disrupted brain functioning has also been implicated in OCD. Although researchers have disagreed over the type of brain functioning that is impaired in OCD, there is some convergence in the literature for the hypothesis that OCD reflects impairments in functions connected to the orbito-frontal and basal ganglia regions (Hoehn-Saric & Greenberg, 1997). For instance, Baxter and colleagues found

that OCD patients had increased levels of activity in the left orbital gyrus, and bilaterally in the caudate nuclei, when compared to controls and individuals with unipolar depression (Baxter et al., 1987). Further, using Single Photon Emission Computed Tomography (SPECT) technology, another group of researchers found more perfusion in the frontal structures of OCD patients compared to controls (Harris, Hoehn-Saric, Lewis, Pearlson, & Streeter, 1994).

The problem with biological theories of OCD is that despite the availability of modern imaging technology, there is still poor understanding about the direction of causality between biological changes and OCD. Some researchers have suggested that frontal hyperactivity leads to the preservation of intrusive thoughts (Baxter, Schwartz, Guze, Bergman, & Szuba, 1990). Other researchers have suggested that such hyperactivity reflects state-distress and activities associated with the disorder (Cottraux & Gerard, 1998). In support of the latter view, studies have shown that metabolic levels in various brain regions of OCD patients decrease significantly following cognitive-behaviour therapy (e.g., Schwartz, Stoessel, Baxter, Martin, & Phelps, 1996).

3.1.6   Ethological Models of OCD

According to proponents of the ethological perspective (Dodman, 1998; Rapoport, 1989), obsessions and compulsions represent exaggerated forms of evolutionary self-protective behaviours. These authors propose that the different forms of compulsive behaviour in humans and animals reflect species-typical expressions of survival-oriented behaviours. The behaviours are purported to be deposited as motor programs in brain regions such as the basal ganglia, but become liberated when necessary by environmental cues. Thus, according to this model, OCD reflects the inappropriate release of encrypted motor programs from the basal ganglia and limbic regions of the brain.

Evidence for the ethological model of OCD is weak. Support from the model primarily comes from observations of OCD-like behaviours in animals. For example, researchers have observed compulsive type behaviours in dogs (e.g., canine acral lick), birds (e.g.,

feather picking) and horses (e.g., cribbing) (Bordnick, Thyer, & Ritchie, 1994; Dodman, 1998; Stein, Shoulberg, Helton, & Hollander, 1992). These observations suggest that compulsions are exaggerated phylogenetic patterns of behaviour. However, only selective features of OCD have been observed in animals. The more complex rituals such as counting rituals, or symmetry compulsions appear less likely to be related to survival instincts of the species. Further, ethological researchers of OCD have not addressed the cognitive and attentional processes related to OCD.

3.1.7   Neuropsychological Models of OCD

OCD has been associated with diverse cognitive impairments. Researchers have suggested that many of the symptoms characteristic of OCD such as repetitive rituals and intrusive thoughts reflect broader impairments in spatial ability, memory, and executive functioning. The empirical support for these impairments in OCD is mixed (reviewed in Greisberg & McKay, 2003).

There is some support for the role of such impairments in OCD. For example, various researchers have found that individuals with OCD have diminished ability to perceive and manipulate objects in two and three dimensional spaces (Savage, 1998). Further, researchers have found that OCD patients have deficits in storing visual and verbal information (Purcell, Maruff, Kyrios, & Pantelis, 1998a; Savage, 1998) and in organizing and planning abilities (Nielen & Den Boer, 2003; Purcell et al., 1998a; Savage, Baer, Keuthen, & et al., 1995) These deficits have been implicated in contributing to the excessive indecision shown by some OCD patients (e.g., "Did I turn the tap off?", "Did I wash my hands?") and to the repetitive rituals that ensue. The specificity of such neuropsychological deficits to OCD, relative to anxious and depressed controls, has been established (Purcell, Maruff, Kyrios, & Pantelis, 1998b).

However, researchers have also identified various inadequacies with the model. First, some research has shown that the impairments in cognitive function in OCD may be secondary to broader belief variables. For example, researchers have found that individuals with OCD may report problems with recollection because of a lack of

confidence in their memory, rather than because of deficits in the ability to recall information (McNally & Kohlbeck, 1993).

Second, due to heterogeneity in tests and samples employed across studies, researchers have remained uncertain about the nature, causal status and specificity of these cognitive impairments in OCD (Taylor, 2002). For instance, one recent study failed to find a systematic relationship between memory performance and compulsive checking, leading the authors to conclude that visuo-spatial memory impairment had little aetiological significance for compulsive checking(Tallis, Pratt, & Jamani, 1999). Further, in a review of neuropsychological studies of OCD, Otto (1992) found that it was unclear whether the neuropsychological deficits found in OCD patients were indicative of predisposing neuronal pathology or were simply reflections of OCD states.

Third, various researchers have maintained that the model has not addressed the heterogeneity of OCD symptoms (Otto, 1992; Taylor, 2002). For example, Taylor (2002, p. 4) asks "why does one person develop checking compulsions while another develops hoarding rituals?". Finally, these models have not been able to account for why exposure and response prevention is an effective treatment of OCD (Savage, 1998). Thus, while neuropsychological factors may play an important role in the vulnerability for OCD, there needs to be more clarity about their role in the development and treatment of specific OCD symptoms, as well as their interaction with learning and belief factors in predisposing an individual to OCD (Otto, 1992).

3.1.8   Behavioural Model of OCD

In the context of behavioural theories of fear acquisition and maintenance (Dollard & Miller, 1950; Mowrer, 1960), OCD is regarded as the culmination of conditioning experiences (Rachman & Hodgson, 1980; Teasdale, 1974). Separate conditioning mechanisms are purported to be involved in the acquisition and maintenance of OCD. Classical conditioning is advanced as relevant to the acquisition of OCD, while operant conditioning processes are said to underlie the maintenance of OCD (Rachman & Hodgson, 1980; Teasdale, 1974).

For example, a person may develop fear of certain thoughts because of an observed association between the thoughts and danger. The person may come to believe that a certain thought is unlucky because something bad occurred while having the thought. Because of this contingent association, the person may mistakenly believe that the thought played a pivotal role in causing the danger. Tallis (1994) discusses two patients who developed OCD because they experienced an association between negative thoughts and harmful outcomes.

The maintenance of OCD is said to rest on operant conditioning, where the person attempts to avert distress or threat by avoiding stimuli related to the thought, by suppressing the thought itself, or by engaging in compulsive rituals. For example, the person may replace the unlucky thought with a lucky thought in order to avert distress or the threat. Despite temporarily lowering distress, such avoidance strategies reinforce the person's mistaken assumptions about the threat associated with certain thoughts.

The behavioural theory of OCD is valuable because it provides a theoretical justification for the most effective intervention to date for OCD – exposure and response prevention (ERP) (reviewed in Franklin & Foa, 1998). This intervention involves the patient exposing himself or herself to the feared stimulus and refraining from escaping or from ritualising. The procedures are effective because they allow the individual to habituate to the feared stimulus and to challenge mistaken beliefs about the danger associated with the stimulus. In other words, the effectiveness of ERP rests on the premise that with the prevention of avoidance, the patient is confronted with information that is inconsistent with his or her expectations of threat, and so fear is extinguished.

However, although the behavioural model of OCD appears satisfactory in accounting for the acquisition and maintenance of some OCD symptoms, a number of criticisms have been noted. Primarily, the model fails to differentiate between OCD and different anxiety disorders (Salkovskis, 1998). The same two processes in the acquisition and maintenance of fear have been implicated in all anxiety based problems. Thus, the model does not account for why some individuals develop intrusive thoughts and

compulsions, while others develop different symptoms (e.g., phobic avoidance). In short, the behavioural model does not clarify factors involved in the vulnerability for OCD.

More specifically the behavioural account of OCD does not address the role of individual differences in the development of the disorder. Why do individuals respond differently to stimuli despite similar conditioning experiences? For example, individuals may respond differently to intrusions that occur in association with aversive stimuli. One may believe that the intrusions are connected to the stimuli, while another may conclude that the intrusion is inconsequential. In order to account for these types of individual differences, cognitive models of OCD have acknowledged the role of beliefs and interpretations in the predisposition and maintenance of OCD.

The need for more specific models of OCD that address personal vulnerability is also warranted given that a majority of OCD sufferers are unable to recall conditioning events associated with symptom onset (Jones & Menzies, 1998). Most OCD sufferers describe the onset of their symptoms as gradual, and not as the result of traumatic conditioning events (Rasmussen & Tsuang, 1986). It is difficult to draw on behavioural theory to give a complete account of the aetiology of OCD.

Finally, the behavioural model of OCD does not appear to fully explain the motivational processes underlying compulsions. According to behavioural theory, compulsions are motivated by the desire to avoid or reduce distress. Therefore, it should follow that once discomfort has reduced, compulsions should stop(Rachman & Hodgson, 1980, p. 377).   Further, the substitution of more effective methods for reducing subjective discomfort should see a weakening of ritualistic behaviour. However, contrary to the first hypothesis, some OCD individuals engage in persistent and repetitive compulsions in the absence of discomfort. In contrast to the second hypothesis, many OCD individuals do not easily substitute compulsions with other forms of neutralising strategies. In fact, most OCD sufferers admit that their compulsions are excessive or not logically connected to the fear. It appears that compulsions are typically motivated by more than the reduction of distress or immediate consequences.

3.1.9   Cognitive Model of OCD

The cognitive models of OCD emerged in order to redress some of the limitations of the behavioural model. Proponents of the cognitive model frame obsessions and compulsions as products of catastrophic misinterpretations of one's thoughts, images or impulses (Rachman, 1993, 1997, 1998, 2002; Salkovskis, 1985). According to these authors, appraisals (interpretations) and avoidance behaviours (e.g., neutralisations) are jointly involved in the development and maintenance of OCD symptoms. For instance, Salkovskis (1985) argues that individuals with OCD appraise automatically occurring intrusions as posing a threat for which the individual is personally responsible. Further, Rachman (1993, 1997) emphasises that these individuals interpret intrusive thoughts as having negative implications for moral standards or real world outcomes. Therefore, according to these accounts, while most people interpret their intrusive thoughts as harmless, individuals with OCD make dysfunctional appraisals such as the following: "Having thoughts like these means that I really want to hurt someone, and that means I am a dangerous person who must take extra precautions to make sure I don't lose control" (Taylor, 2002, p. 5). Consequently, compulsions are performed in order to attenuate the sense of threat that results from these appraisals.

Given the unhelpful consequences related to these appraisals, why do individuals make appraisals about threat or responsibility about their intrusions? According to cognitive theorists such as Beck (1967), Salkovskis (1985) and Rachman (1997), such interpretations are influenced by beliefs and assumptions about the self, world and others, which in turn are shaped by early life experiences and relationships. A range of beliefs and assumptions have been nominated as guiding these appraisals. In one of the earliest attempts to clarify the beliefs relevant to OCD, Wollersheim and McFall (1978) suggested individuals with OCD overestimated the importance of maintaining high standards in order to avoid criticism and punishment, the unacceptability of having repugnant thoughts and the extent to which one could influence real-world outcomes by magical rituals.

More recently, an international group of investigators summarised the most important beliefs associated with OCD (Obsessive-Compulsive Cognitions Working Group [OCCWG], 1997). In their review of the literature, the group identified six belief domains that were specific or relevant to OCD. These domains were (a) Overestimation of threat, (b) Intolerance for uncertainty, (c) Inflated sense of personal responsibility, (d) Perfectionism (e) Beliefs about the over-importance of thoughts and (f) Beliefs about controlling thoughts.

A variety of psychometric measures have been used to measure these various belief domains (reviewed in OCCWG, 1997). The Obsessive Beliefs Questionnaire (OBQ-87) was developed by the OCCWG to measure the various domains in a single questionnaire (2001; 2003). More recently, the OCCWG (in press) developed a shorter version of the OBQ-87, which has similar psychometric properties to the longer version. The existence of these measures and others like them has enabled researchers to test for the significance and specificity of the various belief domains to OCD. Across the studies using such measures, there is strong support for the relationship of these cognitive domains to OCD (Obsessive-Compulsive Cognitions Working Group, 2001, 2003). Support is also available from treatment and experimental studies that have produced changes in OCD symptoms by manipulating participants' beliefs (Freeston et al., 1996; Lopatka & Rachman, 1995; Rassin, Merckelbach, Muris, & Spaan, 1999). The following sections review the theoretical background and research relating to the involvement of the six belief domains in OCD, as measured by the OBQ-87.

3.1.9.1 Overestimation of threat.

Overestimation of threat refers to beliefs that increase the probability and severity of harm. Examples of such items on the OBQ-87 that reflect this belief domain are "I believe that the world is a dangerous place" and "Bad things are more likely to happen to me than to other people"(Obsessive-Compulsive Cognitions Working Group, 2001, p. 1004).

Theorists propose that individuals with OCD view the world as dangerous, and see themselves as poorly equipped to cope with threat (Rasmussen & Eisen, 1989; Salkovskis, 1985; Van Oppen & Arntz, 1994). Kozak and colleagues (Kozak, Foa, & McCarthy, 1987) postulate that OCD patients believe situations are dangerous until proven safe, creating a bias for harm. Further, Rachman (1997; 1998)adds that the overestimation of threat increases the range and seriousness of perceptions of threat.

Research employing self-report measures has supported the involvement of beliefs about threat in OCD. As early as 1972, a study found that OCD patients gave more cautious responses than other groups on a self-report questionnaire about risk taking (Steiner, 1972). Similarly, another study found that patients with OCD reported avoiding taking daily risks more than normal controls (Steketee & Frost, 1994). Accordingly, the OCCWG (2001) found that compared with normal controls, OCD patients scored significantly higher on the threat estimation scale of the OBQ-87.

Beliefs that overestimate the likelihood and seriousness of threat do not create an exclusive vulnerability for OCD. Such beliefs are commonly associated with other anxiety and mood disorders (Beck & Emery, 1985). For example, overestimations of threat, particularly about bodily sensations are believed to be central to the development of panic disorder (D.M. Clark, 1988), while overestimation of the threat of negative interpersonal evaluation is common in individuals with social phobia (D.M. Clark & Wells, 1995). Indeed, research has shown that the overestimation of threat belief domain poorly discriminates OCD subjects from those with other anxiety disorders. For example, OCCWG (2003) failed to find differences between OCD and anxious control participants on the threat estimation scale of the OBQ-87. Similarly, other researchers found that levels of threat estimation did not predict OCD severity beyond mood and worry, suggesting that threat estimation was not specific to OCD (Steketee, Frost, & Cohen, 1998).

Thus, it may be that only some aspects of beliefs about threat are more exclusive to OCD than other beliefs (see Sookman & Pinard, 2002). For instance, Salkovskis (1999) has proposed that estimations of threat implicating personal agency (e.g., "I am

responsible for harm") are more specific to individuals with OCD, than threat estimations of a more general nature (e.g., "This is a dangerous place").

3.1.9.2 Intolerance for uncertainty.

Intolerance for uncertainty, as measured by the OBQ-87 refers to beliefs about danger associated with uncertainty. Individuals who score highly on this belief domain are said to lack confidence about their capacity to cope in situations that are ambiguous unpredictably. These individuals believe that it is necessary to be certain, in order to avoid unpredictable events. Examples of items on the OBQ-87 that measure this belief domain are "If I'm not absolutely sure of something, I'm bound to make a mistake" and "In order to feel safe, I have to be as prepared as possible for anything that could go wrong" (Obsessive-Compulsive Cognitions Working Group, 2001, p. 1004)

Beech and Liddell (1974) and more recently, Rachman (2002) proposed that the repetitions observed in compulsions were the result of failures to arrive at feelings of certainty. Other researchers have added that individuals with OCD are intolerant of feelings of uncertainty – i.e., "not just quite right" experiences – and so engage in repetitive attempts to gain absolute certainty (Coles et al., 2003).

Consistent with these theoretical assertions, researchers have found strong relationships between measures of intolerance for uncertainty and OCD symptoms. For example, Steketee and colleagues (Steketee et al., 1998) found that the tolerance for uncertainty scale of their Obsessive-Compulsive Beliefs Questionnaire (OCBQ) correlated significantly with OCD scores after accounting for mood and worry, and discriminated OCD participants from anxious and normal controls. Further, the OCCWG (2001) also found strong correlations between the uncertainty subscale of the OBQ-87 and OCD scores on the Padua Inventory and Y-BOCS, even after controlling for mood and worry variables.

Despite some evidence for the specificity of intolerance for uncertainty in OCD (OCCWG, 2001), studies have failed to support the exclusivity of these beliefs in OCD.

For example, using the uncertainty scale of the OBQ-87, group comparisons between 257 OCD participants and 104 anxious controls failed to find higher levels of intolerance for uncertainty in the OCD group (OCCWG, 2003). Indeed, researchers have suggested that intolerance for uncertainty is commonly found in a spectrum of disorders including GAD (Dugas, Gagnon, Ladouceur, & Freeston, 1998) and OCPD (Pollak, 1979).

3.1.9.3 Inflated sense of personal responsibility.

Central to Salkovskis' (1985; 1996) cognitive formulation of OCD is that individuals with OCD appraise certain intrusive thoughts as indicating the potential of threat for which they are personally responsible for causing or preventing. These appraisals are said to emanate from an inflated sense of personal responsibility. This belief has been defined as

> The belief that one has the power which is pivotal to bring about or prevent subjectively crucial negative outcomes. These outcomes are perceived as essential to prevent. They may be actual, that is having consequences in the real world, and/or at a moral level (Salkovskis et al., 1996).

An inflated sense of personal responsibility refers to the belief that one is pivotal in causing or preventing negative outcomes. The OBQ-87 measures this domain with items such as "I often think I am responsible for things that other people don't think are my fault" and "When I hear about a tragedy, I can't stop wondering if I am responsible in some way" (Obsessive-Compulsive Cognitions Working Group, 2001, p. 1003)

Salkovskis (1996; 1998) has further suggested that an important characteristic of the sense of inflated personality responsibility in OCD is the failure to distinguish between causing harm (commission) and preventing harm (omission). These individuals believe that by failing to prevent a potential harmful outcome, they have actively chosen to allow the harm to happen. Thus, according to Salkovskis, individuals with OCD

perceive themselves as agents of harm, regardless of whether they are actively or passively involved in negative outcomes. An example of this kind of thinking is "If I don't act when I foresee danger, then I am to blame for any consequences if it happens" (Salkovskis & Forrester, 2002, p.49). The presence of an intrusive thought signifying harm is appraised as significant because it is interpreted as indicating personal agency for harm and an imperative for preventative action (Wroe & Salkovskis, 2000) . Consequently, neutralisations are initiated in order to avert the threat of being responsible for some deeply undesirable outcome.

The extent to which intrusions are interpreted as indicating personal responsibility are purported to provide the necessary link between the experience of an unwanted intrusion and the occurrence of distress and neutralising efforts (Salkovskis & Freeston, 2001). There is strong empirical support for the relationship between an inflated sense of personal responsibility and obsessive-compulsive phenomena. Studies using non-clinical and clinical participants have consistently shown a strong relationship between measures of responsibility attitudes, responsibility appraisals and obsessive-compulsive phenomena (Freeston et al., 1992; Obsessive-Compulsive Cognitions Working Group, 2001, 2003; Rheaume, Freeston, Dugas, Letarte, & Ladoucer, 1995; Wilson & Chambless, 1999). Accordingly, studies have shown that individuals with OCD score higher on self-report measures of responsibility and guilt than do non-clinical-controls (Salkovskis et al., 2000; Shafran, Watkins, & Charman, 1996b) or other anxious populations (Obsessive-Compulsive Cognitions Working Group, 2001, 2003, in press; Salkovskis et al., 2000). Researchers have also found that treatment related changes in OCD are associated with the reduction in the tendency to interpret intusions as indicating personal responsibility (Freeston et al., 1996). More specifically, some researchers have observed changes in checking behaviour to follow experimentally manipulated levels of responsibility in non-clinical participants (Bouchard, Rheaume, & Ladouceur, 1999; Ladouceur et al., 1995) and clinical participants (Lopatka & Rachman, 1995). Thus, appraisals concerning personal responsibility for causing or preventing threat appear to be a significant cognitive mechanism for the maintenance of OCD.

Salkovskis and colleagues contend an inflated sense of responsibility is specific to OCD compared to other anxiety disorders. Empirical research supports this contention. When compared to anxious controls, OCD sufferers scored higher on measures of responsibility beliefs and appraisals (Obsessive-Compulsive Cognitions Working Group, 2001, 2003, in press). Further, responsibility measures have been found to account for significant variance in measures of OCD, after controlling for depression and/or anxiety (Salkovskis et al., 2000; Scarrabelotti, Duck, & Dickerson, 1995). Using the OBQ-87 subscale for responsibility, the OCCWG also found that responsibility was associated with OCD independent of depression and anxiety (Obsessive-Compulsive Cognitions Working Group, 2001).

3.1.9.4 Perfectionism.

Perfectionism according to the OCCWG (1997) refers to the belief that there is a perfect solution to every problem, that doing something perfectly is possible and necessary, and that even minor mistakes have serious consequences. This definition is consistent with the construct of negative perfectionism (Slade & Owens, 1998), where the function of perfectionistic behaviour is to avoid mistakes and failure (Obsessive-Compulsive Cognitions Working Group, 2001). OBQ-87 items measuring perfectionism include "I must keep working at something until it is done exactly right" and "For me, making a mistake is as bad as failing completely" (Obsessive-Compulsive Cognitions Working Group, 2001, p. 1004).

Early theorists such as Janet (cited in Pitman, 1987) and McFall and Wollersheim (1979) argued that individuals vulnerable to OCD strived for perfectionism in order to avoid criticism, social disapproval and punishment. Guidano and Liotti (1983) propose that individuals with OCD are perfectionistic in order to resolve a sense of ambivalence in self-concept. These authors stressed that the need for certainty emerges from the "will to act in a way so irreproachable as to conform to the positive side (of the self) and repudiate the negative side" (p. 263).

The relevance of perfectionism in OCD has been widely subjected to empirical scrutiny. Refinements in the conceptualisation and measurement of perfectionism in the last decade (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt, Flett, Turnball-Donavan, & Mikail, 1991; Slade & Owens, 1998) have led to a growing number of studies on the relationship of perfectionism and OCD. Several studies have demonstrated a strong relationship between perfectionism and obsessive-compulsive phenomena in clinical and non-clinical samples (reviewed in Frost, Novara, & Rheaume, 2002; Shafran & Mansell, 2001).

For example the perfectionism subscales from both OBQ-87 and OBQ-44 were found to correlate significantly with a self-report measure of OCD even after partialling out anxiety and depression (Obsessive-Compulsive Cognitions Working Group, 2001, in press). Accordingly, compared with non-clinical controls, individuals with OCD scored significantly higher on the OCQ perfectionism subscale (Obsessive-Compulsive Cognitions Working Group, 2001). One study has also shown perfectionism to be related to obsessive-compulsive phenomena, even after perceptions of responsibility were partialled out (Rheaume et al., 1995). Further research has found perfectionism to be associated with various features of OCD such as compulsive indecisiveness (Frost & Shows, 1993), hoarding symptoms (Frost & Gross, 1993), and compulsive checking (Gershuny & Sher, 1995).

Perfectionism although relevant to OCD, is not specific to the disorder. Research has shown strong associations between perfectionistic beliefs and depression, eating disorders, social phobia, OCPD and physical health disorders (reviewed in Shafran & Mansell, 2001). Accordingly consistent with this research, the OCCWG (2001; 2003) found that their OCD sample did not score higher than anxious controls on the perfectionism subscale of the OBQ-44. In their review of the literature on the association between perfectionism and OCD, Frost et al., (2002) conclude: "despite general support for the association of perfectionism and OCD, there is no convincing evidence that any identified dimension of perfectionism is more closely tied to OCD than to other disorders" (p. 100).

Furthermore, there are suggestions in the literature that only certain features of perfectionism may be relevant to OCD. In a recent review of the perfectionism literature, Frost et al. (2002) suggest that, compared to positive perfectionism, negative forms of perfectionism are more closely associated with psychopathology including OCD. Negative perfectionism involves cognitions and behaviours designed to avoid failure while positive perfectionism refers to cognitions and behaviours designed to achieve success (Slade & Owens, 1998). In support of this distinction, Rheaume et al. (2000) found that their sample of "dysfunctional" perfectionists characterised by negative perfectionism, were more obsessional and took more time to complete a precision task than the "functional" perfectionists", whom were characterised by positive perfectionism.

3.1.9.5 Over-importance of thoughts.

Beliefs about the importance of one's thoughts play an important role in the cognitive formulation of OCD (Rachman, 1997; Salkovskis, 1985). Central to cognitive theory of OCD is the proposition that intrusive phenomena are neutral experiences, which may be appraised in a range of ways. Individuals vulnerable to OCD are said to appraise their intrusive experiences as personally significant. The intrusions may be appraised as prophesising harm to self or others, for which the sufferer believes he or she will be personally responsible (Salkovskis, 1985).

In an attempt to clarify why intrusions are associated with an exaggerated sense of personal responsibility, guilt, and threat, Rachman (1993) suggested that individuals with OCD equate their thoughts with actions and moral consequences. He proposed that these individuals believe that unwanted thoughts increase the likelihood of harm and that having these thoughts is morally equivalent to actually causing harm. According to Rachman (1993) the tendency to credit thoughts with an inflated degree of importance reflects an enduring assumption that the mere presence of the thought is a precursor to harm and an indictment on personal morality. This psychological fusion between thought on the one hand, and action and morality on the other, is known in the literature as thought-action fusion (TAF)(Rachman, 1993; Thordarson & Shafran, 2002).

Two subtypes of TAF have been identified: TAF-likelihood and TAF-moral (Shafran, Thordarson, & Rachman, 1996a). TAF-likelihood is the assumption that thoughts can increase the likelihood of harm. This subtype includes beliefs such as "Thinking about something bad makes it more likely to happen" and "Having violent thoughts means I will lose control and become violent" (OCCWG, 1997, p. 678). TAF-moral is the assumption that thoughts and actions are morally equal. It includes beliefs such as "Having a bad thought is the same as doing a bad deed" and "My intrusive thoughts reflect my true nature" (Obsessive-Compulsive Cognitions Working Group, 1997, p. 678). Thus, at a deeper level, TAF-moral also includes the belief that the intusions reveal one's 'true' personality or character – for example "Only wicked people have this type of thought" (Shafran et al., 1996a, p. 380). The belief that one's thoughts, images and impulses provide information on personal attributes is central to the concept of TAF-moral, and to the cognitive theory of obsessions (Rachman, 1998).

There is anecdotal support for TAF in the thinking of the OCD patient. As early as 1934, Blueler (1916/1934) observed that obsessional patients "fear(ed) that they might destroy their beloved ones through a thought" (p. 561). Shafran and colleagues discuss two OCD cases with TAF (Shafran et al., 1996a). The first was of a religious patient who "while praying, experienced intrusive images of having sexual relations with Jesus. This patient believed that she had sinned against God by having such an image and was therefore an immoral person" (p. 308). The second case was a father who experienced intrusions about harming his son while dressing him. The patient regarded the intrusions as "meaning that he was a wicked pedophile who was unsafe to be left alone with children because he was liable to harm them" (p. 380).

A number of studies have supported the relationship between TAF and obsessive compulsive phenomena. Using a non-clinical sample, Rachman and colleagues found that their TAF scale correlated significantly with measures of OCD, depression and guilt (Rachman, Thordarson, Shafran, & Woody, 1995). Further, compared with non clinical controls, OCD sufferers reported significantly higher levels of likelihood and

moral subtypes of TAF (Shafran et al., 1996a). Results from OCCWG (2001; 2003) also are consistent with these studies.

The strongest support for the role of TAF in OCD comes from research conducted by Rassin and colleagues, which investigated the effects of experimentally induced TAF (Rassin et al., 1999). In this research, 19 non-clinical volunteers underwent a 15-minute bogus electroencephalogram (EEG) recording session. They were informed that the apparatus was able to pick up the word "apple" and that thoughts of that word could result in the administration of electrical shocks to another person. Rassin and colleagues found that experimentally induced TAF resulted in a significant increase in the participants' unwanted intrusions of "apple" and discomfort. Rassin and colleagues concluded that TAF leads to thought suppression attempts, which in turn paradoxically results in more obsessive compulsive symptoms (Rassin, Muris, Schmidt, & Merckelbach, 2000).

However, evidence is weak for the specificity of TAF in OCD. Some research has found that TAF is specific to OCD compared to other anxiety disorders. The OCCWG (2001; 2003) found that, compared with anxious controls, the OCD cohort regarded their thoughts as more important. Further, Coles, Mennin and Heimberg (2001) found that TAF was related to OCD features as measured by the Obsessive-Compulsive Inventory (OCI), even after controlling for Penn State Worry Questionnaire (Brown, 1992). However, other research has not shown such differences. For example, Rassin and colleagues found equal levels of TAF in patients with OCD and other anxiety disorders (Rassin, Philip, Harald, & Peter, 2001). Further studies have shown that TAF is not only associated with symptoms of OCD, but also with symptoms of other anxiety disorders and depression (Hazlett-Stevens, Zucker, & Craske, 2002; Muris, Meesters, Rassin, Merckelbach, & Campbell, 2001). Using the Thought-action fusion scale (Shafran et al., 1996a), Abramowitz and colleagues (Abramowitz, Whiteside, Lynam, & Kalsy, 2003) investigated differences in TAF-likelihood and TAF-moral across six homogenous groups of anxiety and mood disorders (OCD, GAD, Panic Disorder, Social Phobia, Depression and Non-Patients). They found no difference on TAF-moral. Even though they found that the OCD group had higher levels of TAF-likelihood compared to the

Social Phobia and Non-Patient groups, the differences disappeared after controlling for anxiety and depression. The researchers suggest that TAF may be associated with commonly experienced negative affect rather than specific symptoms of any one diagnostic group.

3.1.9.6 Importance of controlling one's thoughts.

Beliefs about the importance of controlling thoughts refers to the overvaluation of the importance of exerting complete control over intrusive thoughts, images or impulses, and the belief that this is both possible and desirable (Purdon & Clark, 2002). These beliefs include those about the imperative for control of negative intrusions (e.g., "I must control every thought that enters my mind, especially negative ones"), the moral consequences of failing to control these thoughts (e.g., "Losing control of thoughts is as bad as losing control over behaviour"), and the efficiency of thought control (e.g., "Efforts should result in immediate and prolonged control") (Purdon & Clark, 2002, p. 31).

Beliefs about mental control have been implicated in the development of OCD. According to Purdon and Clark (2002), these beliefs result in a heightened vigilance for the occurrence of unwanted, unbidden thoughts and strategies for controlling such thoughts. Various thought control strategies have been identified, including distraction, social control, worry, punishment, reappraisals and compulsions (Wells & Davies, 1994). Individuals with OCD have been found to resort to worry, punishment and reappraisal, and compulsions, more typically than individuals with other anxiety disorders (Amir, Cashman, & Foa, 1997; Ladouceur et al., 2000).

Since the findings of Wegner and associates (Wegner, Schneider, Carter, & White, 1987), where deliberate suppression of a neutral thought led to an escalation in its frequency, there have been many studies investigating the role of thought suppression in the persistence of negative intrusions in OCD (Riskind, Williams, & Kyrios, 2002). However these studies do not consistently support the importance of thought suppression in OCD. Some researchers have found that thought suppression leads to

more frequent obsessional thoughts (Salkovskis & Campbell, 1994; Trinder & Salkovskis, 1994), while others have not (Janeck & Calamari, 1999; Purdon & Clark, 2001). The discrepancy in findings about the effects of thought suppression is believed to be due to differences in methodology, to the thought suppression strategies used, and to the types of thoughts suppressed (Purdon & Clark, 2002; Smari, Birgisdottir, & Brynjolfsdottir, 1995).

Given that these control strategies are supposed to derive from underlying beliefs about the importance of eradicating negative thoughts, researchers have also investigated whether there is a relationship between these beliefs and OCD symptoms. Researchers have found support for the association. Clark and colleagues found that scales measuring beliefs about the importance of thought control predicted obsessional symptomatology in non-clinical individuals (Clark, Purdon, & Wang, 2003), even after controlling for other belief factors such as responsibility and TAF (Clark & Purdon, 1995). Further, they found that OCD sufferers scored significantly higher on this measure, than did non-clinical individuals (Clark & Purdon, 1995). There is also evidence supporting the specificity of beliefs about the importance of controlling thoughts in OCD. The OCCWG (2001, 2003) found that compared with anxious and non clinical controls, OCD sufferers scored significantly higher on the OBQ-87 subscale of thought control.

3.1.9.7 Summary of research on OCD related belief domains.

In summary, there is generally strong support for the relationship between OCD symptoms and the six belief domains identified by the OCCWG (1997) in non-clinical and clinical samples. Although support is most apparent in correlational studies employing self-report measures, there is also strong support from experimental studies and treatment outcome studies, particularly for the involvement of inflated sense of personal responsibility, perfectionism and TAF in OCD.

There is less support for the specificity of some of these belief domains in OCD. Scales of the OBQ-87 correlate highly with anxiety, depression and worry, thus showing a lack

of discriminant validity. As noted by OCCWG (2003), the belief domains share approximately as much variance with other measures of psychopathology (worry, depression, anxiety) as with obsessive compulsive symptoms. The least specific belief domains are perfectionism, tolerance for uncertainty, TAF, and overestimation of threat, as these have not been found to consistently discriminate between OCD and anxious controls. The most specific belief domains are an inflated sense of personal responsibility and importance of controlling one's thoughts.

The next sections highlight some unresolved questions regarding the cognitive model of OCD, providing a basis for investigating the role of self-concept in the maintenance of OCD.

3.2   Unresolved Issues in Cognitive Models of OCD

Despite the advances offered by the cognitive approach, with respect to the theory and treatment of OCD there are several questions that have remained poorly addressed by the model? For example, why do OCD sufferers endorse the belief domains that engender vulnerability for OCD? What is the basis for the strong relationships observed between these belief domains? What early developmental influences cultivate these belief domains? What cognitive factors predict response to, and relapse after CBT?

We suggest that these questions can be addressed by investigating the OCD sufferer's experience of self. We hypothesise that a model that incorporates the self-concept in OCD, provides a heuristic for the motivations underlying OCD behaviours, the basis of the relationships between OCD relevant belief domains, the types of developmental experiences relevant to the cultivation of these belief domains and the processes involved in treatment response and relapse.

3.2.1   Motivation and OCD

The cognitive and behavioural models of OCD provide a compelling account for why individuals with OCD engage in compulsions and other strategies for controlling intrusions. Behavioural theorists argue that compulsions are maintained by negative reinforcement, that is, the removal of personally significant threat. Cognitive theorists add that compulsions serve to maintain standards of control, safety, responsibility, morality, and certainty. For example, the cornerstone of Salkovskis' theory (1985) is that individuals with inflated beliefs about personal responsibility appraise a negative intrusion as implicating threat for which they are accountable, and thus take actions in order to alleviate their accountability or agency for such threat. Similarly, as espoused by Rachman (2002) individuals engage in checking rituals to retain a sense of personal morality.

However, what is less clear from the cognitive model are the feared consequences that are associated with failures to meet standards of responsibility, morality or perfection. Stated another way, why should it matter to the person if they are irresponsible, allow immoral thoughts to occur unchecked or fail to live up to perfectionistic standards? It has been suggested that OCD sufferers strive for these standards in order to bolster their sense of self-worth. (Rachman, 1998). Theorists have proposed that OCD sufferers base their sense of self-worth on the extent to which they avoid immoral conduct and social disapproval (Guidano, 1987, 1991; Guidano & Liotti, 1983).. Despite these conjectures, the cognitive model of OCD has not yet adequately understood the role of the self-concept in relation to the belief domains in perpetuating OCD.

3.2.2   Interrelationships Between OCD Relevant Belief Domains

A second gap within the cognitive literature is the lack of understanding about the interrelationships between the various OCD related belief domains. While it is clear that the six OCD belief domains predict OC severity, it is less clear why these domains strongly correlate with each other. The OBQ-87 scales are highly correlated with each other. Correlations among the subscales are in the range of between 0.50 and 0.81 (OCCWG, 2001, 2003). Perfectionism was found to correlate between 0.59 and 0.79 with the other OBQ subscales, and had the highest degree of overlap with Tolerance for

Uncertainty subscale (OCCWG, 2001). Tolerance for uncertainty was found to correlate between 0.63 and 0.81 with the other scales, and related most closely with Overestimation of threat ($r = 0.81$). Importance of thoughts and control of thoughts were found to overlap considerably ($r = .80$), and both scales also correlated highly with other OBQ scales (0.59 - 0.80). Likewise, the responsibility subscale of the OBQ correlated between .60 and .73 with other subscales, and most strongly with Tolerance for uncertainty ($r = .73$).

The associations between the scales may reflect their common loading on OCD (Purdon & Clark, 2002). Alternatively, the OBQ-87 may lack adequate construct validity, thus failing to adequately discriminate between the cognitive domains (Obsessive-Compulsive Cognitions Working Group, 2003; Purdon & Clark, 2002). Some researchers have commented that the belief domains are not completely independent from each other. For example, it has been suggested, that beliefs about controlling thoughts or about responsibility for harm is dependent on whether one credits thoughts with importance in the first place (Bouchard et al., 1999; Ladouceur et al., 1995; Menzies, Harris, Cumming, & Einstein, 2000; Obsessive-Compulsive Cognitions Working Group, 2003).

In order to acknowledge the interdependence between the belief domains, the OCCWG (in press) re-analysed the factor structure of the OBQ-87 with 410 OCD participants and 291 undergraduate students respectively. Items measuring perfectionism and intolerance for uncertainty factored together. Items measuring importance of thoughts and control of thoughts factored together. Items measuring an inflated sense of responsibility and overestimation of threat factored together. Compared to six factors in the OBQ-87, only three factors were identified, explaining 42.1% of variance. The number of items was reduced from 87 to 44, resulting in a shortened version of the OBQ. This questionnaire was called OBQ-44.

Compared with the OBQ-87, the subscales of the OBQ-44 are less intercorrelated. However, they still remain highly correlated ($rs = .42$ to $.72$). This result raises the possibility that the various cognitive domains may not represent independent ways of

thinking. Perhaps these belief domains interact with the self-concept. One reason why the belief domains interrelate is that they all represent rules for regulating self-esteem. In this thesis, we argue that these belief domains serve to stabilise a sense of self-worth. By maintaining perfectionistic standards, stringent responsibility and rigid control over thoughts, the OCD sufferer strives to avoid social disapproval and self perceptions of immorality.

3.2.3 The Development of OCD-Relevant Belief Domains

There continues to be a lack of any coherent understanding of the role played by the individual's past experiences in the development and formation of OCD relevant belief domains. Explanations about the origins of these domains have tended to be idiosyncratic. For example given that life experiences shape the assumptions we hold about ourselves and the world, Salkovskis and colleagues (Salkovskis, Shafran, Rachman, & Freeston, 1999) proposed that assumptions about responsibility can be acquired from a strict moral or religious upbringing, or from other experiences that teach the person codes for conduct and responsibility. With regards to perfectionism, a number of authors have suggested that individuals develop perfectionism because of excessive criticism, high standards and conditional approval from parents (Barrow & Moore, 1983; Frost, Lahart, & Rosenblate, 1991). Conversely Tallis (1994) proposed that the development of TAF in two of his patients was the result of the coincidental pairing during childhood of a wish (e.g., praying that grandfather would die, hoping that father would be taken away) and a subsequent real-world event (e.g., grandfather dying from a heart attack, father killed in an accident).

While these explanations logically account for the development of specific beliefs, they do not offer a coherent account of why individuals with OCD tend to have a cluster of dysfunctional beliefs. It would be rare for an individual with OCD to have elevated responsibility, without also having high conviction in the need for certainty and control of thoughts. Indeed research has shown that individuals with OCD show elevations on all of the six OBQ-87 scales in comparison to non-clinicals (OCCWG, 2001, 2003). The co-existence of several belief domains in OCD casts doubt over the hypothesis that each

belief requires a unique developmental trajectory. It is possible that that these beliefs are different manifestations of common developmental experiences.

3.2.4   Response and Relapse of OCD Patients to CBT

Finally, despite refinements in the therapy formulations and tools, it remains unclear why some OCD patients do not respond to CBT, or do not maintain treatment gains. There has been considerable agreement about the efficacy of CBT for OCD, but relatively less emphasis has been placed on understanding the cognitive factors that account for poor response or to relapse. Up to 50% of OCD patients have been found to fail to respond to CBT or to maintain treatment gains (Abramowitz, 1998; Foa, Franklin, & Kozak, 1998). The extent to which the self-concept is involved in these outcomes is poorly understood.

In summary, the cognitive model of OCD highlights the role of cognitive structures in the development, maintenance and treatment of OCD. It frames obsessions and compulsions as outcomes of belief-domains and appraisals. However, it has not yet adequately conceptualised why individuals with OCD are motivated to conduct themselves according to these beliefs. Second, it has not accounted for the strong associations between these beliefs domains. Third, it has not yet advanced a coherent understanding of the developmental pathways for these belief factors. Finally, it has not yet articulated the cognitive processes relevant to treatment response and relapse.

3.3   Justification For The Investigation of Self-Concept in OCD

Despite the burgeoning interest and research about the role of beliefs in the development and maintenance of OCD, no research has yet investigated the role of the patient's experience of self in perpetuating the disorder. This lack suggests that the self-concept does not add to our understanding of the OCD beyond the more specific belief domains.

However, on closer examination, the self-concept is implicit in the cognitive account of OCD. For example, Salkovskis stresses that individuals with OCD regard themselves as pivotal agents for preventing harm, and so engage in compulsions in order to lessen their role in the occurrence of harm (e.g., Salkovskis et al., 2000; Salkovskis & Forrester, 2002). Compulsions are thus activated in order to remove negative self-perceptions as agents of harm. Likewise, other authors (Purdon & Clark, 2002; Rachman, 1997) suggest that individuals with OCD believe that repugnant intrusions constitute evidence for personal immorality, and thus try to eradicate the evidence by controlling thoughts.

Guidano and Liotti (1983) were the first theorists to generate a model of OCD that explicitly recognised the role of self-concept in accounting for OCD. They proposed that OCD sufferers have an ambivalent conception of self, unable to reconcile contradictory impressions. According to Guidano and Liotti (1983), OCD sufferers suspect themselves as worthless, immoral and unloved, while at the same time, also regard themselves as worthwhile, moral and loved. They strive to resolve these competing self images through excessively following moral and social dictates of integrity and morality. This theory is fully explicated in chapter 4, as it forms the foundation for proposing self-ambivalence as a core vulnerability factor for OCD.

The claim that OCD is characterised by self-ambivalence promises answers to the gaps in the literature identified above. It extends the cognitive formulation of motivation to account for not only the obsessions and compulsions, but also the various belief domains. This extension of the cognitive model casts the various belief domains in OCD as overdeveloped criteria that are used for retaining a positive sense of self. It is possible that the various OCD belief domains interrelate because they are reflect this underlying motivation. It also reframes OCD compulsions as strategies for restoring an experience of self as worthwhile, lovable, and moral. In short, underlying the belief domains and behaviours associated with OCD, is the motivation to resolve self-ambivalence.

If belief domains are expressions of the motivation to resolve self-ambivalence, we can speculate that the development of these belief domains may be related to early

attachment experiences that foster self-ambivalence. Finally, Guidano and Liotti's (1983) model opens up the possibility that the self-concept may be an important target of change in psychological treatment for OCD. The notion of self-ambivalence may prove useful in explaining reasons for failure to respond to CBT or to maintain treatment gains in certain patients.

Chapters 8, 9 and 10 submit these conjectures to empirical analyses, exploring the importance of self-ambivalence in OCD. The next chapter describes Guidano and Liotti's (1983) model in detail, and in particular, their contention that self-ambivalence is central to OCD.

Chapter 4

Self-Ambivalence in OCD

This chapter reviews Guidano and Liotti's (1983) model and defines the notion of self-ambivalence. It explains how self-ambivalence may interact with OCD-relevant belief domains to perpetuate OCD. It also reviews some of the early developmental influences that contribute to the formation of self-ambivalence. Finally, it reviews the literature for evidence supporting the purported relationships between self-ambivalence, OCD and the belief domains.

4.1   Guidano and Liotti's (1983) Model of OCD

Guidano and Liotti (1983) propose that OCD sufferers hold incompatible and competing representations about themselves, regarding themselves as worthwhile and lovable, on the one hand, yet concurrently holding self-views that are exactly the opposite. Consequently, it is said that such individuals have difficulty reaching synthesis about their self-worth, continuously doubting whether they are loved, moral and worthwhile.

In this theory, OCD sufferers are thus poised to search for truth about their self-worth. They evaluate their behaviour and thinking as important criteria for resolving their confusion about self-worth. Their sense of self is unstable and hinged very strongly on their ability to meet or maintain certain criteria for self-worth. Guidano and Liotti (1983) proposed that such criteria revolve around living up to strict moral dictates enforced by social and early family values, and avoiding the disapproval of others.

Guidano and Liotti add that the irreconcilability between competing images of self, leads to over-compensations in decisions about self-worth (Guidano, 1987, 1991; Guidano & Liotti, 1983). They suggest that these decisions are made in all–or–nothing terms. Thus, instead of reaching a compromise about contradictions in self-worth, where

positive and negative features of self are reconciled and accepted, such individuals, according to the Guidano and Liotti, tend to think about the self in absolute terms. This way of thinking is associated with lability in mood and indecision about ones' ultimate worthiness.

Guidano (1991, p. 54) suggests that OCD sufferers "struggle to attain a unitary and reliable perception of one's self image". It is said that they attend closely to, and ruminate about, negative intrusive thoughts, images or impulses, because they fear that these intrusions offer evidence for undesirable personal characteristics. Individuals who are ambivalent about their worth, morality or lovability are said to be predisposed to regard ego-dystonic intrusions as threats to a valued definition of self. Depending on the content of the intrusion (e.g., sexual, aggressive, careless), the vulnerable individual may think that he or she is gay, a killer, a careless worker, immoral, evil or irresponsible. The increased attention given to the intrusion is purported to play a significant role in exacerbating the frequency and persistence of the intrusion. In short, according to Guidano and Liotti's (1983) framework, intrusive thoughts become repetitive and distressing because they are appraised as threats to one's internalised standards of moral purity and social approval.

Conversely, while obsessions may reflect excessive preoccupations about ruptures in one's ideal image of self, compulsions and other neutralization strategies, according to Guidano and Liotti (1983), emerge as solutions for resolving self-ambivalence and reinstating the ideal-self. The model presents compulsions as mechanisms for recommitting to moral and social ideals. For example, an individual may engage in checking compulsions in order to avoid feeling careless, indifferent or irresponsible. Another individual may wash excessively in order to avoid believing that he or she will be responsible for harm to others. As stated by Guidano (1987), "rituals…highlight the typical obsessional striving to…reach a certainty of one's perceived negativity and its possible consequences" (p. 186). According to this perspective, compulsions function to align the self-concept with images of self that are valued and idealised by the individual.

A brief case example may help illustrate the central role of self-ambivalence credited by Guidano and Liotti (1983) in the emergence and maintenance of OCD symptoms. "Sarah", a 32 year old unmarried woman presented to a University Clinic for treatment of OCD. She complained of experiencing intrusive negative thoughts about being molested by her father. Sarah could not explain why she had these thoughts because she felt close to her family and denied a history of abuse. She experienced guilt and remorse about having such thoughts because she feared that these thoughts reflected her unconscious contempt for her father and biased favouritism for her mother. Thus, in order to restore a sense of equal loyalty towards her parents she performed symmetry compulsions, even in areas not directly related to her parents in any obvious way. For example, if she picked up a file with her left hand, she would then pick it up again with her right. For Sarah, these acts of symmetry symbolised her equal devotion to her parents. Sarah perceived the intrusive thoughts and compulsive rituals as significant markers of her self-image. Having these thoughts, were akin to betraying those close to her. By neutralizing the thoughts about her father, she was able to resolve her ambivalence, albeit temporarily, about her status as a devoted, loyal and worthy daughter.

4.2   Self-Ambivalence and OCD-Relevant Belief Domains

Guidano and Liotti (1983) approach OCD from a perspective that acknowledges hierarchical relationships between cognitive structures. The main tenet of this approach is that mental processes are ordered in a hierarchy. According to Liotti (1989), higher order cognitions invariably include representational models about the self. Higher-order processes such as schemas, core organizing principles and basic beliefs (e.g., Safran, Vallis, Segal, & Shaw, 1986) are purported to influence conditional assumptions and instrumental imperatives. For example, in their description of Dependent Personality Disorder, Beck and Freeman (1990) hypothesised that core beliefs such as "I am completely helpless" promoted conditional assumptions such as "If I am not loved, I will always be unhappy" which then culminate in imperatives such as "Don't offend other people". Thus, it is claimed that the functions and meaning of surface appraisals,

beliefs and behaviours are better understood in context of such higher order organising factors.

Similarly, Guidano and Liotti (1983) hypothesise that self-ambivalence represents a higher order construct that provides the motivation for beliefs about, and imperatives for being perfect, moral and/or submissive. They suggest that these imperatives and related beliefs function to protect against loss of self-esteem and further disintegration of identity. Guidano and Liotti explain:

> These kinds of beliefs…work as a sort of protective belt…, preventing criticism and admission of the limitedness to particular experiences of the tacit knowledge about the doubleness of self and reality. These beliefs guide obsessionals' representational models of reality toward a rigid dichotomisation of the reality data in order to avoid mistakes and danger and to find the "perfect solution" (p. 263).

Viewed in this way, the belief domains associated with OCD may constitute an aspect of the protective belt. For instance, Guidano and Liotti (1983) argue that perfectionism emerges as the attempt to establish beyond doubt that the self is worthwhile and lovable. Thus, according to the theorist, perfectionistic beliefs and behaviours represent strategies for the maintenance of self-worth. Further, having beliefs about the need to prevent negative outcomes or negative thoughts, may emerge in context of the motivation to protect one's sense of self-worth. In context of a cognitive model of OCD, self-ambivalence is thus portrayed as core vulnerability in OCD. Its presence provides a rationale for the emergence not only of OCD symptoms but also OCD-relevant belief domains.

The heuristic value of self-ambivalence as core vulnerability is most apparent when attempting to explain why individuals with OCD place an excessive level of importance on the meaning and control of thoughts. Purdon & Clarke (2002) suggest that OCD sufferers place importance on thoughts because the thoughts are regarded as evidence of

undesirable personal characteristics. In support of this suggestion, Rowa and Purdon (2003) found that thoughts threatening valued self-views attracted higher levels of attention from the individual concerned. However, why would some individuals regard thoughts in this way? Consistent with Guidano and Liotti's (1983) perspective, is the suggestion that individuals who are ambivalent about their self-concept would be most vulnerable to regarding repugnant negative intrusions as important information about self, and as potential threats for self-esteem. Individuals who are less ambivalent are likely to discount negative intrusive thoughts as irrelevant to their personality. These persons would know that they are not homicidal, or irrational, or careless, and therefore would be more likely to disregard such ego-dystonic intrusions.

4.3   Self-Ambivalence

Before, reviewing the empirical literature relevant to Guidano and Liotti's postulations, it is important to first outline a definition of self-ambivalence. Guidano and Liotti (1983) refer to at least three aspects of the self that are involved in self-ambivalence Conflicting beliefs about the self, a sense of uncertainty about personal attributes, and a chronic preoccupation with self-worth. Throughout this thesis, this constellation of features has been referred to as self-ambivalence.

Self-ambivalence firstly involves incompatible beliefs about the self. Representations of self are polarised into competing images that are difficult to reject. The self is seen as either positive or negative, without a means of reaching an integrative explanation for the dichotomy, or as described by Guidano and Liotti (1983), a "harmonic unity" (p. 262). Rather, the theorists propose, there is the tendency to engage in all–or–nothing thinking, which temporarily favours one of the dichotomous options. Because both representations of self are still held, it is purported that one's description and evaluation of self fluctuate from one extreme to another, and are felt to be contradictory. Guidano and Liotti (1983) contend that "personal identity emerges in a split form" (p. 261).

According to Guidano and Liotti (1983), these incompatible self-images make it difficult for the individual to be certain about his or her self-worth. The individual

develops a suspicious or uncertain attitude towards his or her assessment of self. The sense of self-worth fluctuates depending on whether one believes that certain conditions/criteria of self-worth have been met (e.g., approval, success in tasks, morality). However even these "evidence-based" self judgments are felt to be brittle and temporary experiences. The tendency to appraise the self in terms of dichotomies makes any conclusion about self too concrete, and thus easy to refute, resulting in a viscous cycle of temporary states from certainty to uncertainty.

It is purported that these individuals try to achieve clarification about their self-concept through being vigilant for signs and conduct aligned with their ideas of positive self (Guidano & Liotti, 1983). Such behaviour is fuelled by the belief that there is a core or true identity that can be crystallised. Behaviours that are consistent with this vigilance include ruminating or worrying about one's sense of self and looking for signs or clues in the outside or internal world about one's true worth. As elaborated by Guidano and Liotti (1983), "these cognitive aspects may be summarised in the image of someone who feels forced, by the unbearable situation of indecision between two opposites, to monitor himself or herself and reality, looking for the true nature of things and the right way to behave" (p. 261).

In summary, according to Guidano and Liotti (1983), the concept of self-ambivalence is characterised by the presence of three related processes: the presence of incompatible beliefs about self, an uncertainty about one's self-worth, and a preoccupation about self-worth. At this point, a tentative distinction can be drawn between the concept of self-ambivalence as exposed by Guidano and Liotti, and the notion of self-esteem. Self-esteem refers to the extent to which one holds positive or negative views about the self. Even-though self-ambivalence concerns evaluations of self-worth, it does not necessarily refer to whether the self is regarded positively or negatively. The extent to which self-esteem is high or low can be independent of whether or not these evaluations are held with certainty, coherence and become a target for constant preoccupation (Kernis, Cornell, Sun, Berry, & Harlow, 1993; Kernis, Grannemann, & Mathis, 1991) . The research relating to this distinction is further explored in the next chapter.

4.3.1   The Developmental Origins of Self-ambivalence

Drawing on attachment theory (Bowlby, 1969), Guidano (1987) contends that healthy parenting provides a secure base from which the child or adolescent can explore the outside world with confidence and support. He explains that within a healthy reciprocal attachment, parents facilitate the child's search for mastery and autonomy and allow the child to perceive himself or herself as loveable and capable of controlling a reliable interpersonal environment that fosters expected outcomes. However, Guidano suggests that if reciprocity of attachment is poor, children are most likely to perceive themselves as unlovable and incompetent – that is vulnerable to an uncontrollable and unreliable environment. In short, he maintains that "parents…provide the most meaningful sources of information for the child's elaboration of a sense of self" (p 46).

Operating within this theoretical framework, Guidano and Liotti (1983; Guidano, 1992) theorise that self-ambivalence reflects a disruption in the emergence and consolidation of a stable sense of self-recognition. Specifically, they suggest that from early infancy to adolescence, the child receives contradictory messages about his or her self-worth from a dominant parent. Guidano and Liotti postulate that the child perceives the behaviour of at least one parent as loving and rejecting at the same time. For example, the parent may show interest in the child but never express affection. Guidano (1987) provides a further example:

> A simple, schematic situation is one in which a parent, though attentive and totally dedicated to the child's moral and social education, never expresses his/her love with tenderness or other affective displays. The simultaneousness of these contradictory aspects in parenting behaviour seems to be an important prerequisite for the obsessive development pathway. As an example of such simultaneousness, imagine a parent talking to his/her child about parental love being one of the most important values in the world while keeping his/her face rigid and expressionless and showing no emotion. (p. 173).

According to Guidano and Liotti (1983; Guidano, 1987), these inconsistent messages of love or recognition leads to the emergence of conflicted and irreconcilable self-representations – that is, seeing oneself as simultaneously lovable and unlovable, and experiencing difficulties developing a unifying sense of self. Accordingly, such individuals mature with competing images of their self. Guidano and Liotti (1983) elaborate

> Such an attachment relationship induces in patients a "double" view of themselves and reality, and the unbearability of such a view causes the need for certainty (i.e., the necessity to find out which one of the two sides is the true one) and the need for perfection (the will to act in a way as irreproachable as to conform to the positive side and repudiate the negative side) (p. 260).

In support of their theory, Guidano (1987) quotes a 29-year-old patient suffering from OCD as saying:

> "What I never could understand is whether my mother really loved me or not. I knew that if she took so much care of me it had to mean she loved me, but she seemed to be doing it only to reproach me" (p. 174).

As the obsessive-compulsive individual matures, Guidano (1987) suggests that the individual becomes better equipped to "control his or her opposite patterns of self perception by actively selecting one of them" (p. 177). The struggle for certainty in self-concept is hypothesised to be resolved through fulfilment of early parental expectations and attitudes about duty, responsibility and ethics. These postulations resonate with broader theories that implicate identification with parental values as a defence against disapproval (see chapter 2). Nevertheless, they remain to be empirically investigated.

4.3.2 Self-ambivalence and Domains of Self-Worth

Guidano (1987) suggests that after an early phase of indulgence, parents may demand maturity and responsibility, seeing the child as a miniature adult. These parents are said to emphasise moral values and ethical principles, while forbidding and dismissing expressions of feelings that are incompatible with such values. This style of parenting promotes in the child a conditional sense of self-regard, where "love itself is doled out as merited" (Guidano, 1987, p. 176). Guidano (1987) postulates that for the obsessive-compulsive individual, self-worth strongly rests on two criteria – approval from other people, and maintaining high moral standards. Guidano (1987) states:

> A steady and dynamic equilibrium will thus become tentatively achievable only as far as the perceiving of oneself as capable of fulfilling others' requirements becomes the 'criterion image' for decoding one's felt identity as acceptable and worthwhile (p. 177).

Regarding the mandate for maintaining moral rules, Guidano (1987) elaborates:

> …the sense of being a positive and firm person depends almost exclusively on the formal adhering to moral rules perceived as absolute certainties. As a consequence, perfectionism is expressed by seeking justice, equity, truth and so on, for their own sake with little correlation to the irreducibly unique aspects of the ongoing concrete situation (p. 180)

Given the early emphasis on moral and social values, Guidano (1987) purports that the child accepts these values as central to one's sense of self. The child's feelings of self-worth become strongly contingent on complying with moral and social dictates. Accordingly, individuals vulnerable to OCD are said to be particularly ambivalent about the extent to which they are competent in each of these domains. In summary, according to Guidano, there develops a discrepancy between the importance credited to, and competence experienced in these domains. The child learns that these criteria for self-worth are highly important, and yet believes them to be not securely attained. Thus, the

child remains particularly vulnerable to stimuli threatening their perceived competence in these domains.

4.4   Self-Ambivalence and OCD: A Literature Review

No study has specifically explored the relationship between self-ambivalence and OCD. There are no published studies that have directly examined the proposition that OCD is a disorder concerned with the repetitive construction of identity, riddled by ambivalent self-evaluations. Guidano and Liotti's (1983) model about OC phenomena representing the struggle for identity or self-definition were based on their clinical observations, and were not informed empirical investigations of the disorder.

Thus, the literature review presented here represents a tentative attempt to draw together studies that appear to be relevant to Guidano and Liotti's (1983) theory. First, studies are presented that have characterised OCD as associated with conflicting inner dialogues and motivations. These studies serve to provide some support for framing OCD as the result of inconsistencies and polarities within the self system. Second, studies are presented that have explored the association between self-esteem and OCD. These studies serve to provide some support for the role of self-esteem in the maintenance of OCD. Finally, studies are reviewed that have portrayed OCD as concerned with the maintenance of self-esteem. These studies currently provide the most relevant support for some of Guidano and Liotti's conjectures.

4.4.1   Conflictual Internal Dialogues in OCD

In an analysis of the narrative of a woman with OCD, O'Neill (1999) observed significant conflicts and discontinuations in the experience and expression of self. O'Neill framed the self as a series of voices that compete for supremacy and control. Even though the conflict described did not centre on the definition of self-worth, the analysis provides a context for defining the self-construct as characterised by conflicting dialogue and a continuous establishing of identity.

O'Neill (1999) used a social constructivist approach to examine the social construction of identity in a woman, called Emma, living with OCD. Using a semi-structured interview, O'Neill focused on the way in which Emma assembled her account of self during the social interaction with the interviewer. O'Neill presented her participant's self-construct as comprising conflicting and distinct voices: the narrative voice [e.g., "That's when (the therapist) referred me to the behaviour therapist", p. 78], the controlling voice " (e.g., " I have to turn the light on again, I have to go through the door, I've just got to look at those flowers on the quilt", p. 79) and an interpretive voice (e.g., "if somebody caught me they would think, oh what a maniac, what is she doing", p. 80).

When O'Neill (1999) presented the discrepancy between the voices to Emma, Emma noted her conflictual experience of self, saying "there's the rational me and there the irrational, imperative OCD voice that just doesn't let me get away with my own thoughts" (p. 81). While Emma viewed the controlling voice as separate from her true self, describing herself as "not that sort of person…I'm too nice to people and too obliging…" (p. 80), she also recognised significant competition between alternative voices in her internal dialogue: "It's the two of us I suppose…battling it out". (p. 81). This qualitative analysis presents Emma's construct of self as a dialogue that is characterised by conflict. Emma likens her struggle against her OCD self as a struggle to define autonomy (e.g., "so you're being pulled in two…just a minute, this is me...", p. 82).

The existence of conflict and disconnection in self-dialogues is also a key feature of Hallam and O'Connor's (2002) model of obsessions. These authors highlight a narrative and dialogical conception of self in which the interactions between the components of self-voices can become conflictual in OCD. In support of this view, they draw on the phenomenological experiences of their OCD clients who 'frequently report that they feel like another person when performing an obsessional ritual" (p. 339) and who experience rituals as 'stronger than they are themselves" (p. 339).

In summary, these case examples reflect attempts by authors to position OCD as a disorder characterised by instability and conflict between facets of personal identity. However, they do not provide necessary evidence that OCD symptoms and belief domains are motivated by the desire to resolve conflicting notions of self-worth, as suggested by Guidano and Liotti (1983). The next section presents studies that have investigated the relationship between self- evaluation and OCD.

4.4.2   Self-Evaluation and OCD

Three empirical studies have explored the relationship between the self-evaluation and OCD. Ruegg (1994) examined the extent to which individuals with OCD were certain about their self-descriptions. In this study, OCD and non-clinical participants were asked to rate themselves on list of adjectives (e.g., punctual, cheerful, modest etc), using an 11-point scale ranging from -5 (extremely unlike me) to 5 (extremely like me). Ruegg found that participants with OCD were more indecisive about their present personal characteristics compared to normal controls. Ruegg argued that individuals with OCD had more ambiguously defined self-schemata than non-clinical controls.

While this study linked uncertainty about self-attributes and OCD status it did not examine the extent to which indecisiveness was specific to self-view, or whether the findings reflected broader impairments in decision-making capabilities. As reviewed in chapter 3, individuals with OCD can have difficulties with making decisions because of fears relating to imperfect solutions or uncertain outcomes. Thus, investigations into the relationship between self-uncertainty and OCD characteristics must control for potential confounding variables such as difficulties in making decisions.

A second study found that low self-esteem was prodromal to the onset of OCD. Fava and colleagues investigated prodromal symptoms in 30 patients with OCD (Fava, Savron, Rafanelli, Grandi, & Canestrari, 1996). They found that 93% of their patients reported at least one prodromal symptom, with 40% reporting lowered self-esteem. This observation does not exclude the possibility that self-esteem problems are associated with more widespread affective distress. Indeed, most common prodromal features were

generalised anxiety (60%), irritability (57%) and phobic anxiety (53%). However, it suggests that self-esteem problems in OCD may be present before the development of the disorder, and thus may play some role in the vulnerability for OCD.

Third, Ehntholt, Salkovskis and Rimes (1999) examined the self-evaluation process in OCD. In this study, the researchers compared 16 individuals with OCD to 25 anxious-controls and 30 normal-controls on two measures of self-esteem. They found that the OCD group scored significantly lower on these measures than did the non-clinical groups. However, the clinical groups were equivalent on both measures. Further, they found negative correlations between measures of OCD symptoms and self-esteem, even after controlling for depression and anxiety. They suggested that "there may be some specificity in the obsessionality/self-esteem relationship not accounted for by symptoms of anxiety or depression" (p. 779).

This study may reveal some information about the relationship between self-ambivalence and OCD. As discussed, self-ambivalence and self-esteem reflect conceptually distinct constructs. However, numerous authors have argued that questionnaires that measure self-esteem, also measure self-uncertainty (Campbell & Lavallee, 1993; Tice, 1993). The connection between self-esteem and self-uncertainty is reviewed in chapter 5. Thus, it is possible that Ehntholt et al.'s (1999) findings also indicate a degree of ambivalence in OCD.

Even if the findings from Ehntholt et al. (1999) are interpreted as suggestive of a link between self-ambivalence and OCD, there remain two unresolved issues. Firstly, the study did not support the specificity of low self-esteem to OCD. The study found that both OCD and anxious controls scored equivalently on self-esteem. More research is therefore required to explore whether individuals with OCD differ in their self-evaluations from patients with other anxiety disorders. It is possible that OCD sufferers evaluate certain personal attributes more negatively or with more ambivalence compared to patients with other anxiety conditions.

Secondly, Ehntholt and colleagues (1999) did not investigate whether self-esteem was related to OCD-related belief domains. Consequently, we do not know how to characterise the relationship between self-evaluations and the belief domains. More research is needed to examine the extent to which these belief domains are related to self-evaluation, and in particular self-ambivalence.

4.4.3   Self-Esteem Maintenance and OCD

Self-esteem maintenance refers to cognitive and behavioural strategies people use to protect or enhance their self-esteem. These strategies include (a) withdrawing effort from perceived tests so that failures need not be attributed to lack of ability but rather to lack of effort (Frankel & Snyder, 1978), (b) avoidance behaviours – e.g., avoiding disapproval from others (Crocker & Park, 2003), and (c) self-handicapping –the creation of physical or psychological impediments to which poor performance can be attributed (Jones & Berglas, 1978). For example, a student who is concerned about the possibility of scoring poorly on an examination may deliberately study less so that a poor grade could be attributed to situational factors such as lack of preparation, rather than to enduring dispositional factors such as lack of intelligence (Kimble, Funk, & DaPolito, 1990).

Researchers have found that people who lacked certainty about self-worth were likely to employ various self-protective strategies. For example, Harris and Snyder (1986) found that white male subjects with uncertain self-esteem used lack of preparation as a self-handicapping strategy when faced with the threat of intellectual evaluation. Similarly, Kimble et al. (1990) found that subjects with low certainty about self-worth were more likely than subjects with high levels of certainty to use self-handicapping strategies. Given the tendency for individuals with uncertain self-esteem to engage in measures to protect against the loss of self-esteem, it is relevant to explore studies that have identified such strategies in individuals with OCD.

In an early study of self-identity, Makhlouf-Norris and Norris (1972) suggested that individuals with OCD engage in self-handicapping in order to protect against threats to

self-esteem. The researchers found that compared with normal controls, OCD sufferers rated their current self as significantly more negative. The researchers suggested that OCD sufferers rate their self-esteem as low in order to avoid revising their sense of self-worth when faced with failure. The researchers suggest that "…the need for self-certainty may be such as to lead to construing the self in a way which predicts undesirable outcomes which are certain to be validated, rather than predict desirable outcomes which are open to test and to the risk of invalidation" (p. 285). Thus, these findings suggest that individuals with OCD engage in such behaviours in order to protect a self-worth.

Similarly, Sookman, Pinard and Beauchemin (1994) presented a case-study of an OCD patient who apparently engaged in compulsions to avoid abandonment and to protect her sense of self-worth. The case study was of a 45 year old married female patient who believed that she would be unloved by her husband if she failed to prevent the onset of breast cancer. She ruminated about cancer after learning that her sister was diagnosed with early lymphoma. The patient checked her breasts five hours a day, sometimes spending this amount of time on a one-inch section. These behaviours appeared to be triggered by automatic thoughts such as "If I don't obsess about and check my breasts, I might develop cancer and it will be my fault" (p. 182). Sookman et al., (1994) reported the patient saying "Even worse than death, if I get cancer, is that I will be disgusting to my husband who will then leave me all alone" (p. 182).

Numerous studies have found that individuals with OCD are fearful of criticism and seek social approval. Bhar and Kyrios (1999) found that OCD symptoms and perfectionism were related to dependency traits. Another study with 24 OCD and 13 with phobic individuals, found that the OCD cohort was more sensitive to criticism than the phobic cohort (Turner, Steketee, & Foa, 1979). Ehntholt et al. (1999) found that in comparison to anxious controls, the OCD participants based their self-esteem on social approval to a greater extent. Further, these researchers found that the OCD cohort was more likely than anxious controls to expect social criticism as a consequence of irresponsible behaviour. These studies suggest that individuals with OCD are extremely sensitive to interpersonal rejection.

These studies provide some support for Guidano and Liotti's (1983) proposal that individuals with OCD are motivated to resolve self-ambivalence. These studies suggest that those with OCD engage in self-protective strategies – such as self-handicapping, avoidance and approval seeking behaviours – perhaps, in order to maintain a sense of self-worth. Importantly, these studies also suggest that certain belief structures such as perfectionism and standards of personal responsibility may serve to protect against social invalidation. These studies offer some evidence that individuals with OCD share the behavioural and cognitive characteristics of individuals who strive to protect their sense of self-worth.

4.5   Unresolved Issues in The Literature Review

Despite the indirect empirical support for aspects of Guidano and Liotti's (1983) theory of OCD, no study has specifically explored the relationship between self-ambivalence and OCD. Thus, there are at least four questions that still remain regarding this relationship. First, despite the existence of a range of measures on self-esteem and self-certainty, there is no measure that specifically addresses self-ambivalence, as defined by Guidano and Liotti. Guidano and Liotti have offered numerous statements about the types of deficits inherent in the self-concept of obsessionals, but these have not yet been operationalised or measured.

Second, there is no study that has specifically explored the relationship of self-ambivalence to OCD phenomena. Little is known about whether OCD is connected to self-ambivalence and the pathways through which such ambivalence maintains OCD symptoms. If OCD symptoms are connected to self-ambivalence, it will be important to examine whether the relationship is mediated by belief domains, in the context of the cognitive model of OCD. Furthermore, if self-ambivalence is important to OCD, to what extent does it contribute to the recurrence and relapse of symptoms following treatment?

Third, it is unclear whether self-ambivalence forms a specific vulnerability for OCD. The literature has not examined whether self-ambivalence is relevant to other anxiety and mood disorders; nor has the literature examined whether self-ambivalence is better related to obsessional personality traits rather than OCD per se. Guidano and Liotti (1983) themselves are not clear about this distinction, and suggest that their theory may apply best to OCD symptoms that are supplemented by an underlying obsessional personality structure.

Fourth, no study has investigated the relevance of self-ambivalence for the treatment of OCD. It is unknown as to whether high levels of self-ambivalence lowers prognosis and inhibits maintenance of treatment gains.

The next two chapters provide a context for exploring the first three questions, while chapter 10 explores the fourth question. Chapter 5 examines the definition of the self-concept in order to provide a context for measuring the unique features of self-ambivalence in contrast to other self-evaluation constructs. Chapter 6 reviews the ways in which the notion of self has been implicated in psychopathology, particularly in models of anxiety and depressive disorders. That chapter addresses the topic of whether specificity can be assumed between self-ambivalence and OCD. Collectively, these chapters provide a context for critically evaluating the construct of self-ambivalence and its role in OCD.

Chapter 5

The Self-Concept

The self is widely considered as central to psychopathology. There is a burgeoning literature on the relevance of self-constructs to maladaptive behaviour, cognition and emotion (Segal & Blatt, 1993). Likewise there is widespread acceptance that self-concepts are important mechanisms of change in therapy (Mahoney, 1990, 1991) and relapse prevention (Emmelkamp, 2002). Despite the importance credited to self-concept in such areas, the literature is far from unified about the definition or role of self-concept in psychopathology. The self is variously defined as schema, prototype, cognitive representation, multidimensional hierarchical construct, narrative sequence, linguistic description, and elaborate theory, amongst others (Brimthaupt & Lipka, 1992). In order to critically define self-ambivalence, it is necessary to examine its position within modern portrayal of the self-concept.

This chapter provides a theoretical and empirical context for defining self-ambivalence in relation to other conceptualisations of self. Given that self-ambivalence is presented by Guidano and Liotti (1983) as the outcome of early attachment relationships, it is argued in this chapter that this concept can be best understood within a social-cognitive framework of self, which emphasises the social and relational aspects in the development and representations of self-views. In order to explore this connection, this chapter discusses the definition of self-concept and presents an overview of various models of the self across philosophical, psychodynamic, empirical, and cognitive perspectives, before focussing on the social -cognitive model of self. The relevance of each model for understanding self-ambivalence is underscored.

Then, this chapter reviews four specific issues in the literature in order to shed more clarity on the construct of self-ambivalence and its role in OCD. First, self-ambivalence is understood in the context of research that has portrayed the self-concept as multifaceted and hierarchical. In such research, the self-concept is presented as

comprising a number of specific self-views, or domains, relating variously to social roles, interpersonal relationships and personal attributes. There is some support that an individual's overall sense of self-worth is determined by how competent he/she regards himself or herself on domains of self that are deemed personally important. Within this context, it is proposed that self-ambivalence is relevant to both an overall self-concept, and to specific self-views relating to personal attributes such as morality and lovability.

Second, self-ambivalence is presented as a structural aspect of self. In the literature, the self-concept is understood as comprising content and structural features. While content refers to the type of beliefs one holds about themselves, structural qualities refer to the extent to which these beliefs are interrelated, strong, clear and stable. This discussion highlights that self-ambivalence is less concerned with what one believes about oneself, but rather with the certainty with which one holds such beliefs.

Third, given the conceptual ambiguities in the usages of terms such as "low self-esteem" "insecure sense of self", and "self-clarity" self-ambivalence is contrasted with self-esteem and other features relating to self-worth, in order to clarify the distinct qualities of self-ambivalence in relation to these other constructs. Specifically, differences are highlighted between self-ambivalence and self-esteem, self-clarity, self-discrepancy, identity-diffusion and self-awareness. Self-ambivalence is presented as a broad construct that includes conflicting beliefs about self, uncertainty about self-attributes and a restless preoccupation with the truth about self-worth.

Fourth, the literature on motivation and self is explored. This literature plays a pivotal role in sustaining the main proposal of this thesis – that individuals who are highly ambivalent about their self-concept, strive to reduce conflict and incompatibility between competing impressions about self. In this thesis, it is argued that that the presence of self-ambivalence provides the impetus for a range of strategies to achieve a sense of completeness and certainty in one's experience of self. For those prone to OCD, these strategies include a rigid enforcement of high standards for self-worth, excessive attention to internal and external markers of self-worth and compulsions. The

literatures on motivation, self-regulation and cognitive dissonance are reviewed as a basis for supporting these propositions.

5.1 What is The Self-Concept?

A major obstacle to defining the self-concept is the sheer number of approaches available for the study of self. As lamented by Baumeister (1998, p. 60), "In some ways, the thousands of journal articles dealing with the self have seemed to make the answer to that fundamental question more elusive rather than clearer". He adds: "…trying to keep abreast of the research on self is like trying to get a drink from a fire hose" (p. 681). In support of these statements, the number of publications in psychology relevant to the self has grown from about 1 in 20 publications in 1970 to 1 in 7 in 2000 (Tesser, Stapel, & Wood, 2002). A recent survey of articles in psychology found 31 550 abstracts dealing with self during the two decades 1974 - 1993 (Ashmore & Jussim, 1997).

A further difficulty in defining the term "self-concept" comes about from the inconsistent and heterogenous usages of the term. In 1991, Mahoney commented, "... the existence of several hundred words and terms…related to the self…has begun to alarm lexicographers" (Mahoney, 1991, p. 212). Relevant terms include self-schema (Taylor & Boggiano, 1987), self-concept (Rogers, 1961), self-theory (Epstein, 1973), self-representation (Markus, 1990), self-categorisation (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), self-construal (Markus & Kitayama, 1991) and identity (Deaux, 1993; Erikson, 1950/1985). In some contexts, terms are used interchangeably to refer to the same underlying construct, while in other contexts, the same term is used to describe significantly different constructs. For example, words used interchangeably with self-concept include self, self-estimation, self-identity, self-image, self-perception and self-consciousness (Hattie, 1992). In other contexts, terms such as self-schema have been used to refer to both explicit beliefs about the self (Markus, 1990) and to implicit beliefs about the self (Epstein, 1973). The 'self' according to Westen (1992, p. 4) is a "mushy, muddle-headed construct without empirical referents".

The very notion of self as a "concept" is also controversial. On the one hand, theorists have regarded the self as an object, on par with external environmental objects, which can be known and perceived (Duval & Wicklund, 1972). However, on the other hand, many philosophers have flagged a problem with this simplistic formulation (see Hattie, 1992). Baumeister (1998, p. 683) reiterates "there is no entity that is the object of such awareness", and rejects the notion that one is "aware of self in the same way you are aware of a table or painting". Accordingly, it has been suggested that self is never directly perceived, but rather known in context of doing an activity. The self is forwarded by Baumeister as an "abstraction, inference, and deduction, rather than something known directly" (p. 684).

Accordingly, in the literature, definitions of self-concept range from being overly comprehensive on the one hand, to overly restrictive on the other. For example, Rosenberg (1979, p. 7) refers to the self-concept broadly as "the totality of the individual's thoughts and feelings having reference to himself (sic) as object". In contrast, some definitions of self have been explicitly narrow. For example, Westen (1992, p. 7) refers to the self-concept as representations of self that "most people verbalise when asked to do so", and Hermans (1987, p. 10) describes the self-concept as "an organised system of valuations".

Given the difficulties in defining the self-concept, along with its widespread and inconsistent usage, some authors have avoided providing a definition altogether. As noted by Allport (1961, p. 128) "it is much easier to feel the self than to define the self". Baumeister (1998) adopts a common sense approach to the definition of self, without actually defining it. He says "…everyone is familiar with colloquial usages for the word self, and the word here is used in the same meaning that it has in everyday speech" (p. 681). In fact Hattie (1992) cautions against presenting a list of definitions for the self, or in using dictionary definitions for the term. He argues that without context, the definitions for the self-concept are "barren" (p. 4), and that dictionaries only record a word's history, rather than rules about what we can and cannot properly say about the term. He remarks that it is futile to operationally define self-concept. Instead he advocates Meehl's (1977, in Hattie, 1992) use of open concepts, where concepts are

defined by a set of convergent reduction sentences. In this system, each sentence offers no complete definition of the term, but together the set of sentences determines the meaning of the term within the field of investigation. The aim, he says, is to leave the concept 'open' for applications in new contexts.

In short, according to prominent writers such as Hattie, Baumeister and Allport, the self-concept is difficult to define. Rather, the meaning of self is better understood as a series of propositions or sentences within the context of particular theories. Similarly, self-ambivalence then should also be understood within such a theoretical and linguistic context. The aim of this chapter is to provide such a context in which to situate the notion of self-ambivalence. This chapter presents self-ambivalence as informed by numerous models of self, and in particular the cognitive and social frameworks.

5.2   *Early Western Philosophical Perspectives on The Self-Concept*

As described in chapter 4, self-ambivalence partly refers to the presence of conflicting representations of self-attributes. However, early philosophers have not always accepted the self as a mental representation or construction. The very existence of self as distinct from other concepts such as person, memory, soul, thinking and perception has been debated for centuries. In early theorising, the self has been variously equated with soul, perception and consciousness (reviewed in Hattie, 1992). In particular, many theorists rejected the distinction between the self as the thinker and an object of thought. For example Descartes explains that "While I wanted to think everything false, it must necessarily be that I who thought was something…I think therefore I am" (in Hattie, 1992, p. 12). Likewise, for Locke (1632-1704, in Hattie, 1992), the self was equated with both the person who was engaged in knowing, and with personal memories.

However, by the late 18th century, thinkers such as Hume (1711- 1776) and Kant (1724 - 1804) began to represent the self as distinct from the person, or from a spiritual substance, and more closely aligned to a mental construction (in Hattie, 1992). They regarded the self as constituting a concept or perception that was based on one's shifting

experiences. In an often quoted passage, Hume (1740, p. 252, in Hattie, 1992, p. 13) says

> For my part, when I enter most intimately into what I call myself, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never catch myself at any time without a perception and can never observe anything but the perception.

Extending upon the role of perception in the construction of self, Mill (1808 - 1873) claimed that the idea of "myself" was related closely with previous ideas of myself, thus bringing about a sense of temporal cohesion to the nature of self (in Hattie, 1992). Spencer (1820-1903) also argued that although the self was a series of impressions and ideas, there was a principle of unity and continuity that bound these impressions (in Hattie, 1992). For some authors (e.g., Bergson, 1911/1975), memory served the function of this binding agent for blending past and present experiences into "one organic whole – the self" (in Hattie, 1992, p. 15).

5.3   Psychodynamic Models of Self

A major limitation of this psychoanalytic approach to the self has been its failure to clearly define and operationalise the construct. Even though, self-representations were implied in many theories on psychopathology (e.g., conflicts between impulses and internalised prohibitions), there has been a disinclination amongst many psychodynamic oriented theorists, to clearly operationalise and define the self (Westen, 1992). The psychoanalytic self-concept has been understood in diverse ways, such as ego, motivation, a person, and a corporeal being. Further, terms such as "defective self structure" and "lack of coherent self" have been used inconsistently to refer to a wide array of internal states ranging from one's inability to integrate memories into one's sense of identity to simply low self-esteem (reviewed in Westen, 1992).

Given the lack of consensus for the definition of self, the relevance of psychodynamic models for informing the notion of self-ambivalence is not immediately apparent. However, at least one theme in the psychoanalytic portrayal of self is particularly important for understanding the emergence of self-ambivalence. In his review of the literature, Westen (1992) concluded that psychoanalytic thinkers construe self-representations as multidimensional, consisting of a large repertoire of enduring representations that can be contradictory. From this perspective, the self is a collage of multiple representations, rather than a single internally consistent summary of one's characteristics. It is within this context of multiplicity in self views, that self-ambivalence can emerge. The existence of multiple contradictory self views allows for the development of a sense of unrest and indecision about the accuracy of conflicting and polarised self-representations. The self as a multifaceted construct is an important framework for self-ambivalence, and therefore, will be addressed in detail later in this chapter.

5.4   James's Model of Self

In modern empirical psychology, the notion of self has been largely influenced by William James (1890). James also represented the self as multifaceted. He conceptualised the self as having both empirical and agentic quantities, thus drawing upon the ideas from Hume, Kant, and Locke. For James, the self was an empirical object of perception or knowledge, and was evaluated on the basis of one's material possessions (including body, clothes and home), social recognition and spiritual qualities (e.g. values, ideals, dispositions, thinking). In contrast, the agentic or subjective-self was said to refer to the self as a knower and construer of reality. Thus, the empirical self and subjective-self referred respectively to the "me" and "I" of the self-system.

The distinction between self as an object to be known and perceived, and self as the subject doing the knowing and perceiving (i.e., an information processing structure) has informed much of the empirical approaches within the modern literature on self. The self as an object of perception has most often been the target of empirical studies, and is

commonly regarded as equivalent to self-concept in modern literature. Many definitions of self in the literature have focussed on the set of beliefs that the person holds about himself or herself, which are generally organised into at least a partly coherent system. For example, in her review of research in social cognition, Fiske (1991) describes the concept of self as "the person's mental presentation of his or her own personality attributes, social roles, past experience, future goals and the like" (p. 181-182). Drawing on the distinction between declarative and procedural knowledge (Ryle, 1949), the self has thus been often defined as a declarative structure – consisting of facts, beliefs, and memories of the person's past.

The self as knower has been less clearly defined in the literature. In current psychological writings about the self, the subjective self is often represented as the reflexive process of representing oneself (Baumeister, 1998). Baumeister calls this aspect of self, executive function, because it "makes choices, initiates, acts and takes responsibility" (p. 682). Numerous models of self across social, psychoanalytic and cognitive theories have incorporated at least implicitly such procedural aspects of knowledge with regards to self. In short, many theorists have considered the self to be both the individual's stated beliefs about themselves plus the rules they use for processing these stated beliefs (Melville, 1998).

Baumeister' (1998) and James'(1890) distinction between the objective and subjective self is pertinent for further clarifying self-ambivalence (Guidano & Liotti, 1983). Self-ambivalence incorporates both executive and representational qualities, of self. Indeed the notion of self-ambivalence cannot be understood without considering both the content of self-representations, and the subsequent activity involved in choosing amongst alternative representations. It is the restless oscillation between these competing representations of self that most clearly characterises self-ambivalence.

5.5   Cognitive Models of The Self-Concept

The notion of self-concept as a cognitive representation of information is widespread in the literature. Various theorists have construed the self-concept as a cognitive construct,

comprising descriptions, prescriptions and expectations about one's attributes, weaknesses and goals. For example, Epstein (Epstein, 1973, p. 417) emphasises that the self-concept is an "implicit theory about (oneself)". Hattie (1992) refers to the self-concept as cognitive appraisals of attributes about our selves. Schlenker (in Baumeister (1987, p. 171) defines identity as "a theory or concept synthesised from knowledge about the self" .

The self-concept is regarded by many writers not only as a mental representation of one's attributes, but also as influencing the way in which one's experiences are appraised. In this way, the self-concept operates as a schema , that is, "an organisation of information about who one is, and often who others want one to be, which is stored in long term memory" (Safran, Segal, Hill, & Whiffen, 1990, p. 145), that "guides recall selectively and provide(s) default information to fill in gaps in ongoing processing" (p. 144). Similarly, Markus (1977) suggests that the self-schema forms a set of beliefs that emerges from one's learning, but then guides the processing of information. She regards this schema as comprising "cognitive generalizations about the self, derived from past experience that organize and guide the processing of self related information contained in the individual's social experience" (p. 64).

The effects of self-schemas on information processing and attentional resources have been widely researched. Self-schemas have been found to influence cognitive activities such as perception, memory and inference. For example, researchers have found that individuals are quicker to process information that is congruent with their self-schemas, than information that is incongruent (MacDonald & Kuiper, 1985). Further, Markus (1977) found that when people were asked to predict their own behaviour, they usually made predictions consistent with their self-schemas. In addition, other researchers have observed that individuals with a low sense of self-worth erroneously predict that others also have congruent beliefs about them (Swann, Wenzlaff, Krull, & Pelham, 1992b).

From the perspective of the cognitive model, self-ambivalence is a factor that influences how attention is directed, and how information is processed (Guidano & Liotti, 1983). Individuals who are ambivalent about their self-worth are said to attend to internal and

external markers of self-worth. Internal negative intrusive thoughts and external behaviours or social cues are scanned for evidence relevant to the evaluation of self (Guidano and Liotti, 1983). The hyper-vigilance for self-effacing information and the attempts to restore valued impressions of self are central to the development of obsessive-compulsive symptoms (Guidano & Liotti, 1983).

The presence of self-ambivalence about morality or lovability is also purported to influence the emergence of dysfunctional appraisals (Guidano and Liotti, 1983). For example, consider a scenario where, someone is walking along the street, and notices a fallen branch. The person may choose to ignore the branch, and to continue walking. However, a person with conflicting notions of self may interpret this situation as a test of character. The individual may see himself or herself as virtuous should he or she remove the branch, or alternatively as immoral, should he/she do nothing to prevent harm. By acting in a particular way, the individual chooses amongst these rival conceptions of self, thus temporarily resolving ambivalence about personal attributes. Self-ambivalence thus operates as a self schema in the sense that it influences how information is processed and responded to.

5.6   *Social Models of the Self-Concept*

Social theorists focus on the importance of social and cultural factors in the formation and representation of the self. They observe that individuals usually describe themselves according to their roles in society (student, worker, sister, etc.) and in accordance with cultural norms (Brown, 1988). Numerous authors such as James (1890), Cooley (1902/1964), Schlenker (1980) and Mead (1934) claim that representations of self are inherently social rather than individualistic cognitive constructs. For example, Cooley refers to the self-concept as a "looking glass", implying that self-views are inferences one makes about how others in society regard oneself. Similarly, Schlenker construes identity as a theory constructed about how one is defined and regarded in social life. James (1890) writes "A man has as many social selves as there are individuals who recognise him and carry an image of him in their mind (p. 179). Mead (1934) emphasises the role of language in the socialisation process. Through the use of

language, Mead says that the "individual develops the role not only of a specific other person with respect to himself or herself, but of a group of others – real or inferred – that corresponds to society's representation within the individual" (in Hattie, 1992, p. 19).

There are notable models and research programs of self that have emphasised the need to address others and social situations within self-representations. Particularly important in this regard are theories such as social identity theory (Tajfel, 1982) and self-categorisation theory (Turner et al., 1987). These theories propose that part of an individual's self-concept is derived from "his (sic) knowledge of his (sic) membership in a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1982, p. 255). From a developmental angle, Sherif (1967) argued that a person matures having a frame of reference that is derived from reference groups – that is, groups serving as guides or standards for the individual's judgement, perception, roles and behaviour. Much research has supported the tendency for individuals to define themselves based on social groups, and the importance of these definitions for self-worth (Deaux, 1993).

In contrast to social theories that advocate social foundations to the development and representation of self-concept, there have also been arguments for the existence of "personal" aspects to self-definition that exist independent of group membership or social context. It is these personal aspects of self, that function to emphasise the "uniqueness and separateness" of the individual from his or her social group (Gaertner, Sedikides, & Graetz, 1999, p. 5). Allport (1955, p. 40) suggested that self-identity be called the "proprium", a term to be used interchangeably with words such as 'self' and 'ego' but with a focus on what is 'peculiarly ours'. He explained that the sense of personal identity emerges gradually as the child realises that he or she is not the other, but a being in his or her own right.

Given the long tradition in western philosophy that emphasises personal freedom, self-determination and competition, western psychological research has been criticised for failing to adequately address the role of others in the self-concept (Markus & Kitayama,

1991; Markus & Kitayama, 1994) . Such research has framed self-concept as largely independent of social context. Cross-cultural research has suggested that such a conceptualisation of self-concept is common within Western countries and perhaps reflects a generally individualistic orientation of Western Culture (Markus & Kitayama, 1991).

In response, researchers operating from social-cognitive paradigm have included both aspects in the definition of self. For example, Fiske (1991, p. 180) says "We know ourselves by our social roles, such as student, son, or daughter, or spouse, and we have a conceptual sense of ourselves, that is an impression of our own attributes and personal qualities". Other researchers have even attempted to articulate how personal and social aspects of self-concept interact. Consistent with the looking-glass metaphor of self (Cooley, 1902/1964), theorists and philosophers such as Mead (1934) and Sartre (1956) maintain that such individuality may influence the socialisation process itself. Sartre says, "we are not lumps of clay; and what is important is not what people make of us, but what we make of what they made us" (p. 49). As a further example of the attempt to integrate individualistic and group based notions of identity and self, Deaux (1993) refers to identity as social categories in which an individual claims membership coupled with the personal meanings associated with those categories. She argues that the distinction between social and personal is arbitrary and misleading because "personal identity is defined, at least in part, by group membership and social categories are infused with personal meaning" (p. 5).

The central tenet amongst theorists within the social framework is that the self-concept involves representations of interpersonal relationships, social roles and situational contexts. In particular, the role of caregivers is seen as critical to the development of self-representations. Researchers have suggested that from about 2 years of age, the child begins to develop an appreciation of parental standards and reactions (Stipek, Recchia, & McClintic, 1992), and that in adolescence, the self-concept increasingly parallels the evaluations of the child's parents (Oosterwegel & Oppenheimer, 1993). Indeed there is a growing body of evidence revealing that parental approval is critical in determining self-esteem of children. For instance, in reviews of such evidence, parental

support in the form of approval and acceptance was found to be highly associated with high self-esteem in children and the sense that one is lovable (Feiring & Taska, 1996; Harter, 2003). Harter summarises this finding, saying

> ...young children who experience their parents as sensitive to their needs and supportive of their mastery efforts will construct a model of self as lovable and competent. In contrast the young child who experiences the parent as rejecting or neglectful will forms a model of self as unworthy (p. 583).

Guidano and Liotti's (1983) theory of self-ambivalence is an elaboration of this social framework, because it emphasises the role of social and early attachment factors in the development of self-evaluation. In the tradition of social-cognitivists, Guidano and Liotti maintain that conflicts about self-worth are intricately related to the extent to which one feels accepted, valued and loved by significant caregivers. Guidano (1991) emphasises this, saying "the central feature of the developmental pathway of an obsessive… organisation concerns the elaboration of an ambivalent sense of self resulting from dysfunctional patterns of familial interaction" (p. 172).

5.7   Interim Summary: Self-Ambivalence and Models of Self

In summary, several aspects of the notion of self-ambivalence are informed by current models of self. The psychodynamic framework allows for self-representations to exist in conflict with each other. It proposes that the self can be disunited. It is within this context that self-ambivalence can occur. Similarly, James (1890) presents the self as multifaceted, but stresses the divergence of self as an object – which is represented as a concept – and as a subject, endowed with executive functioning capabilitities. Self-ambivalence is informed by both these aspects of self, given that it incorporates discordant representations of self and a restless indecision about the reliability of each of these representations. The cognitive model of self portrays the self-concept as a mental representation – a theory about personal characteristics. It highlights the role of

beliefs and schemas in determining the appraisal of, and attention to information. Within this context, self-ambivalence is portrayed as schematic because it is said to influence the type of appraisals made about situations. Finally, the social perspective is also useful in highlighting the role of parental approval in the determination of self-ambivalence.

A plethora of research has been conducted employing social and cognitive paradigms of self. The next sections highlight important findings and constructs from such research that helps clarify important definitional issues with regards to self-ambivalence. In particular, the next sections review the literature in support of conceptualising self-ambivalence (a) as multi-faceted, (b) as a structural quality of the self-concept, (c) as distinct to other self-evaluation processes such as self-esteem and (d) as part of the motivational system for OCD.

5.8 *Multiplicity of The Self-Concept*

Traditionally, empirical research on the self-concept has regarded the self-concept as a uniform, enduring and monolithic structure that remains consistent over time, comprising an abstraction of essential traits from the individual's past behaviour (Markus & Kunda, 1986). Concepts such as core self-conception and self-schema have been used by researchers to highlight the stable concepts of self that are unresponsive to variations in social situations and contexts. To illustrate, Erickson's usage of "identity" refers to one's feelings of continuity over time (Erikson, 1950/1985).

In contrast, in modern research paradigms "the self as a unitary construct is no longer viable" (Westen, 1992, p. 11). Since James (1890) proposed that each person has numerous images of themselves, corresponding to their relationship with different social groups, the self-concept has increasingly been portrayed as a multi-dimensional notion (Brimthaupt & Lipka, 1992; Harter & Whitesell, 2003; Marsh, Richards, & Barnes, 1986). In particular, it is argued that each person plays a number of roles in society and have somewhat different concepts of themselves associated with these roles. As summarised by Gray (1994), a person might see himself or herself as authoritative in the

role of employer, submissive in the role of daughter or son, but companionable in the role of wife or husband. Accordingly, Harter and colleagues found that adolescents gave different ratings to their self-esteem when with teachers, parents, male classmates and female classmates (Harter & Whitesell, 2003). Based on factor analysis methods primarily with children and adolescents, researchers have suggested numerous domains by which individuals judge themselves – e.g., scholastic competence, athletic competence, peer likeability, physical appearance, behavioural conduct, close friendships, romantic appeal, job competence, academic self, non-academic self and social self (reviewed in Harter, 2003).

There is some evidence that as people mature, their self descriptions become increasingly integrated and abstract. For example, in a study of self-concepts of middle class children and adolescents in the United States, Damon and Hart (1992) found that preschoolers described themselves almost exclusively in physical terms. However, by about the ages of 6 to 8, the children begin describing themselves in psychological as well as physical terms (e.g., I'm pretty smart"). In adolescence, according to the researchers, self description begins to be organised around social relationships (e.g., I have many good friends), and later also in terms of personal beliefs and plans (eg., "I am a devout Christian"). In fact, research has shown that by the beginning of middle childhood, individuals can make global judgements about their worth as a person, as well as provide specific self evaluations across a variety of domains (Harter, 2003).

Therefore, the relationship between these specific self-views and one's overall sense of self has been the subject of longstanding interest. There have been numerous models on the relationship between specific and global notions of self (see Marsh, 1986). Some researchers have considered global self-worth as an apex of a hierarchy of a multidimensional model of self (Shavelson, Hubner, & Stanton, 1976). In such a hierarchy, perceptions of personal behaviour in specific situations contribute to inferences about self in broader domains which in turn influence the general self-concept. For example, in Shavelson et al.'s (1976) model, general self-concept is divided into two broad domains –academic and non-academic. The academic domain is

divided into self-concepts specific to school subjects, and non-academic self-concept is divided into physical and social components.

Researchers propose that measures of self-worth should retain both the notion of global self-esteem and a focus on constituents of the self-concept. For example, Rosenberg (1979) argues "Both exist within the individuals' phenomenal field as separate and distinguishable entities and each can and should be studied in its own right" (p. 20). Harter (1996) agrees that individuals can make global judgements of their worth as a person as well as provide specific self-evaluations across a variety of domains. Thus, many self-report measures of self-esteem have preserved the construct of global self-esteem in addition to domain specific representations of self. For example, the Self-Description Questionnaire (Marsh, 1986) comprises of seven domain specific factors (reading, mathematics, school in general, physical ability, physical appearance, peer relations and parent relations), and one factor tapping into global perception of the self. Similarly, the Self Perception Profile for Children (SPPC) comprises of six subscales (Harter, 1985). Five of these measure domains such as scholastic competence, social acceptance, athletic competence, physical appearance, and behavioural conduct. The sixth subscale measures global self-worth.

However, one of the most influential models of the relationship between global self-concept and domain specific self views is James' (1890) hierarchical model. According to James, people place different levels of importance on specific aspects of self. James predicted that aspects of self perceived to be personally important would have greater impact on global self-esteem, than do less important domains. He proposed that one's overall sense of self-worth would be largely influenced by the extent to which one succeeded in domains that were personally important. In support of this model, some research has shown that individuals do value some domains more highly than others (Harter & Monsour, 1992) and that competence in domains deemed important is more highly correlated with global self-esteem (r of .70) than competence in domains judged unimportant (r = .30) (Harter, 2003).

These models help clarify Guidano and Liotti's (1983) description of self-ambivalence in at least two ways. First, the suggestion that individuals hold multiple conceptions of themselves allows for the possibility that individuals are ambivalent about only some domains of self. It is important to note that Guidano and Liotti (1983; Guidano, 1991) do not explicitly narrow the sense of ambivalence to specific domains of self. In fact, Guidano's (1991) writing suggests that the sense of ambivalence is experienced on a global sense of self – or as variously referred to ,as "self-recognition" (p. 176), "self-perception" (p. 176), self-boundaries" (p. 177), and "self-identity" (p. 178). However they refer to the self-concept as a multidimensional construct. For example, Guidano (1992) remarks

> Each one of us not only has different perceptions and evaluations of ourself in relation to different domains of experience – work, private life, social life, and so on – but also, within each domain, experiences changes in the sense of self according to the quality and intensity of the ongoing emotional experience (pp. 85 – 86).

Their model is consistent with the hypothesis that individuals prone to OCD are ambivalent about certain domains of self. Guidano and Liotti argue that individuals prone to OCD strive towards unity and stability of self by adhering to formal moral rule and social dictates. Further, their case examples portray these individuals as concerned with "moral errors" (p. 247) and "people's criticism" (p. 253). Therefore, consistent with Guidano and Liotti's assertion is the possibility that OCD sufferers are particularly ambivalent about their personal morality and lovability.

Second, James' (1890) hierarchical model of self appears to underlie Guidano and Liotti's (1983) framework. As detailed in chapter 4, Guidano and Liotti assert that individuals prone to OCD base their overall sense of self-worth on the extent to which they gain social approval and meet moral dictates. For individuals prone to OCD, morality and social approval are said to reflect highly important domains of self-worth. Therefore, following from Harter's research (Harter, 2003), it follows that success within these domains will lead to an overall sense of self-worth. Similarly, if these

individuals are ambivalent about their competence in these domains, then they would also feel ambivalent about their overall sense of self.

5.9   The Structure of The Self-Concept

The conceptualisation of self-concept as a multifaceted organised knowledge structure that contains traits, values, episodic and sematic memories about the self, allows for a distinction between the contents of the self-concept and its structure (Campbell et al., 1996). Structural characteristics of the self-concept refer to how the knowledge components or specific self-beliefs are organised. The contents of the self-concept refer to the types of beliefs and appraisals that one holds about one's traits, attributes, physical characteristics and goals.

Research has focussed on numerous structural aspects of self-concept. For example, Linville (1985; 1987) investigated self-complexity – the number of different and independent dimensions that underlie the organisation. Other researchers have examined the extent to which pieces of self-knowledge were integrated (Donahue, Robins, Roberts, & John, 1993). Showers (1992) researched the extent to which positive and negative self-beliefs were compartmentalised into different dimensions. Kernis and colleagues explored the extent to which self evaluations were unstable (Kernis et al., 1991).

Self-ambivalence also can be construed as a structural aspect of the self-concept. As defined in chapter 4, self-ambivalence refers to the extent to which the contents of an individual's self-concept are held with uncertainty, contested by conflicting self knowledge, and constantly under scrutiny for accuracy. Self-ambivalence is theoretically independent of the contents of self-concept, because any particular set of self-beliefs could in principle be held with different levels of ambivalence.

5.10 The Distinction of Self-Ambivalence to Other Self-Related Constructs

Self-ambivalence overlaps with a number of other constructs relating to the structure and evaluation of self. The aim of the next few sections is to contrast self-ambivalence to these constructs, in order to highlight the similarities and differences between self-ambivalence and the more traditional constructs.

5.10.1 Self-Clarity

In the literature, there are numerous references to the variability in people's certainty about their attributes. For example, Campbell et al. (1996) coined the term self-clarity to represent the extent to which the contents of the self-concept are clearly and confidently defined, internally consistent and temporally stable. Further, in a refinement of Erikson's theory, Marcia (1966) proposed two stages of identity development that involve unclear conceptions of the self. The first is identity diffusion, in which the person is poorly committed to portrayal of self. The second stage is called moratorium, in which the person actively thinks about and questions various occupational paths and values.

Self-ambivalence is different from these concepts in an important way. While self-ambivalence includes the notions of uncertainty and inquisitiveness about self-attributes, it is a broader because it also incorporates the notion that people have competing beliefs about self from which to choose. People high in self-ambivalence are not poorly informed about their attributes. Rather, they hold on to conflicting images of self, where each image appears equally valid. It is the oscillation between these competing notions of self that characterises ambivalence. The term ambivalence purposefully represents the vacillation in attention and endorsement paid to conflicting beliefs about self. The uncertainty that manifests is thus a reflection of the difficulties in deciding between these beliefs.

5.10.2 Competitive Self-Views

The foundation of self-ambivalence is the presence of conflicting representations of self. According to the self-ambivalence theory of OCD, people who are highly ambivalent are said to have conflicting views about their morality and lovability. On the one hand the person believes they are moral and lovable, and on the other, concurrently immoral and unlovable. Due to an inability to reach integration between these representations, such individuals oscillate between them in search of definite conclusions about self.

This notion of conflict within the self-system is a widespread heuristic for psychological distress in psychoanalytic, clinical and social research (Freud, 1909/1987; Millon & Davis, 1996; Westen, 1992). A well-known social theory of self-conflict is the self-discrepancy theory (Higgins, Klein, & Strauman, 1985). According to this theory, people have various representations of themselves in terms of their actual self (how they currently are), their ideal self (how they would like to be) and ought self (what they think they should be). In this theory, it is argued these representations can be incongruent from each other, and that such discrepancies trigger agitation and dejection related emotions. The presence of such discrepancies can also motivate people to take constructive actions to reduce the discrepancies (Higgins, Strauman, & Klein, 1986b). There is some support for the link between self-discrepancies and affective distress For instance, researchers have found that the wider the discrepancy between different conceptions of self, the higher the level of distress (Higgins, Bond, Klein, & Strauman, 1986a; Higgins et al., 1985).

Self-ambivalence is similar to the notion of self-discrepancy in that it incorporates the idea that people can have discrepant representations of themselves. It also shares with the self-discrepancy theory the notion that conflictual representations of self can lead to distress and to attempts at resolving the conflict. However, self-ambivalence is different to self-discrepancy because it does not address the distinction between the actual and ideal self, nor representations of the future in the self-concept. The focus of self-ambivalence is mainly on the current self. People who have high levels of self-ambivalence are presented as indecisive about the accuracy of conflicting representations of the current self. It is the quest for accurate information about the self

that characterises the motivation in such individuals, rather than only the desire to meet idealised representations of self.

In fact, given that self-ambivalence is characterised as a failure to integrate competing evaluations of the current self-image, it is conceptually similar to the psychodynamic notion of splitting. As defined in DSM-IV (American Psychiatric Association, 1994, p. 757), splitting is "the …failure to integrate the positive and negative qualities of the self or others into cohesive images" where…"self and object images tend to alternate between polar opposites: exclusively loving, powerful, worthy, nurturing and kind – or exclusively bad, hateful, angry, destructive, rejecting of worthless." An important difference between the constructs is that self-ambivalence does not require aspects of self to be hidden or blocked from consciousness.

5.10.3 Self-Awareness

Self-ambivalence involves a tendency to excessively monitor one's behaviours and thoughts. Therefore it is similar to the notions of chronic self-awareness and excessive self-focus. These latter constructs refers to the chronic tendency to focus on self-attributes, in search of reliable information about self.

Researchers have found that individuals who reflect about themselves have more detailed and accurate knowledge about their personal and interpersonal characteristics (reviewed in Franzoi, Davis, & Markwiese, 1990). The tendency to reflect about the self appears to serve to enhance self-knowledge and mental health. How then can self-ambivalence be related to maladjustment, as is implied in Guidano and Liotti's (1983) model?

Two explanations exist for the paradox. First, theorists have maintained that people desire knowledge about themselves (Trope, 1979, 1980, 1982). They argue that individuals strive to understand the causes of their behaviours and to attain accurate self knowledge. Therefore, it is feasible that people who are highly conflicted and uncertain about their inner attributes will also be highly reflective about themselves in order to

gain self-clarity. Indeed, research has found that self-uncertainty promotes chronic efforts for self-clarity (Trope, 1982). Therefore, uncertainty about self may represent an antecedent to chronic self-reflection.

Secondly, Guidano and Liotti (1983) portray individuals with self-ambivalence as not merely seeking knowledge about the self, but rather as anxiously attentive to competing impressions of self. In such individuals, thoughts and behaviours are scanned for their potential to constitute threats to valued notions of self. Therefore, in self-ambivalence, self-attention serves a defensive purpose to alleviate anxiety, rather than to satisfy intellectual curiosity. This distinction is addressed by Trapnell and Campbell's (1999) concepts of reflection and rumination. In their framework, reflection is motivated by philosophical curiosity, and involves "playful exploring of novel, unique or alternate self-perceptions" (p. 290). In contrast, rumination is motivated by the need to alleviate anxiety about threats to self-esteem, and involves "compulsive attending to perceived threats, losses, and injustices to the self" (p. 290). Rumination and reflection have been found to be statistically and psychologically distinct (Trapnell & Campbell, 1999). Self-ambivalence is thus hypothesised as conceptually closer to the notion of rumination than reflection.

5.10.4 Self-Esteem

Self-esteem involves a value judgment about the self, and refers to the "positivity of the person's evaluation of self" (Baumeister, 1998, p. 694). It refers to appraisals or judgements one makes about the extent to which one has reached particular standards of worth. Although words such as self-concept and self-esteem have frequently been used interchangeably, authors have argued that the self-concept refers to an over-arching construct that includes both descriptive and evaluative aspects (Campbell, 1990; Campbell & Lavallee, 1993). Thus, according to Campbell and colleagues, self-description refers to the configuration of beliefs an individual has about his/her attributes. Descriptive statements about the self can be made (e.g., "I am 5 feet tall", "I have blue eyes", "I am a wife", etc.), without necessarily involving an evaluation about

the relative worth of such attributes. In contrast, self evaluation refers to appraisals or judgements one makes about these attributes.

As outlined previously, prevailing models of self-evaluation emphasise the multidimensional nature of self evaluations (Harter, 2003). Researchers have argued for a domain specific model of self-esteem, because individuals can differ on their self-esteem across different domains of self (Harter, 2003; Higgins et al., 1986b). For example, a person may have a very high sense of self-esteem for their capacity to solve mathematical problems, but a very low sense of self-worth in the area of social relationships. Borrowing from James (1890), Marsh (1986) proposes that self-esteem cannot be understood if "its multidimensionality is ignored" (p. 1225).

How is self-ambivalence related to self-esteem? As indicated in chapter 4, self-ambivalence is conceptually distinct from self-esteem. Whereas, self-ambivalence refers to the extent to which one's evaluations of self are held with restless uncertainty, self-esteem describes the extent to which one's opinion of self is positive. Thus, self-ambivalence refers to the certainty of self-regard, while self-esteem pertains to the valence (i.e., positivity or negativity) of these opinions.

Despite these conceptual differences, there is an emerging literature that supports a strong relationship between certainty and valence of one's evaluations of self. Studies have found that low self-esteem is accompanied by self-knowledge that is less stable, less consistent and less clear. For example, Baumgardner (1990) found that people with low self-esteem had poorer articulated self-concepts than those with high self-esteem. She found that the low esteem group had more difficulty describing themselves, and took longer at describing themselves, compared to people with high self-esteem. Similarly, Greenwald, Bellezza and Banaji (1988) found that people with high self-esteem had more elaborate conceptions of self. In their study, subjects with high self-esteem furnished a longer list of self features, than subjects with low self-esteem. Likewise, Campbell (1990) found that over time, individuals with high self-esteem were more consistent about self-descriptions, than were individuals with low self-esteem. Psychometric investigations of the relationship between self-uncertainty and self-esteem

have also supported a strong relationship between the two concepts. Individuals who are unsure about self-worth also tend to score low on measures of self-esteem (Baumgardner, 1990; Campbell et al., 1996; Rosenberg, 1979).

Although self-esteem and self-certainty appear to be related, there is poor understanding about the basis of this relationship. One reason is that low self-esteem is more pliable and therefore more vulnerable to change, in comparison to high self-esteem (Campbell et al., 1996). Another reason is that unstable self-views predispose towards low self-regard. Individuals with poorly developed self views may be more likely than those with certain conceptions of self, to make downward revisions of these views when failing to meet social or achievement standards(Pelham & Swann, 1989).
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Further, the relationship between self-certainty and self-esteem has also been attributed to measurement and classification errors (Tice, 1993). Classifying individuals into those with high or low self-esteem is relational, in the sense that individuals with "low" self-esteem do not typically score low on questionnaires of self-esteem, but rather score towards the middle on likert scales, thereby signifying their lack of commitment to either pole of the rating scales (Tice, 1993). From this perspective, individuals labelled as low in self-esteem should actually be redefined as having uncertain views regarding self-worth. Thus, although self-esteem level and uncertainty are different theoretical concepts, their interdependence may be partly due to poor construct validity in their measures.

5.11 Self-Concept and Motivation

Guidano and Liotti's (1983) model of OCD is essentially a motivational model because it proposes that individuals with self-ambivalence strive for closure about their self-worth. The presence of self-ambivalence is purported to motivate the individual to over-compensate in fostering a sense of completeness and certainty in the experience of self. For those prone to OCD, these over-compensations include a rigid enforcement of high standards for self-worth, excessive attention to internal and external markers of self-worth and compulsions. Guidano and Liotti (1983) present compulsions as self-

regulatory strategies to protect one's positive views about moral and sociable facets of self. Likewise obsessions are presented as overly scrutinised cognitions. This self-scrutiny is said to be motivated by one's desire to learn the truth about self. OCD symptoms are products of one's desires for positive self-views, and for accurate information about these self-views. In short, within Guidano and Liotti's model, the self-concept is motivational. The literature on self and motivation is explored below in order to understand more clearly how the self-concept can provide the motivation for behaviours.

Many writers have proposed that individuals are motivated to understand, enhance and confirm their representations of self. These writers regard the self-concept as motivational, in the sense that it provides an explanation for a person's behaviour. Trope (1979; 1982) suggests that individuals seek to appraise their abilities, opinions and traits. In support of this hypothesis, Trope (1986) found that in the absence of extrinsic social or material factors, individuals choose tasks that give them the most information about their abilities, on which they are uncertain. Bem (1972) suggested that individuals reflect about themselves, attend to social feedback, and observe their own behaviours in order to gain better knowledge about internal attributes and values. There is considerable evidence that has highlighted the importance placed on private phenomena such as thoughts and feelings as a guide for what someone is really like (see Fiske, 1991).

Research has also shown that individuals strive to maintain self-esteem, even when such impressions may be inaccurate (reviewed in Baumeister, 1998). Self-enhancing biases have been noted in self-perceptions, such as the tendency to judge positive traits as overwhelmingly more characteristic of self than negative traits, to forget more easily one's failures than success, and to regard the self more positively when compared to judgements from others (reviewed in Fiske, 1991). Other research has found people to be less critical about evidence that portrays them favourably than unfavourably (Pyszczynski, Greenberg, & Holt, 1985). It is argued that these positive distortions serve an adaptive role in maintaining one's feelings of wellbeing and happiness (Taylor &

Brown, 1988). Accordingly, individuals with depression have not usually been found to exhibit such biases (Fiske, 1991).

The literature has identified various methods for people to achieve or maintain these unrealistically positive self-deceptions. These strategies are similar to those employed to maintain other schemas (Young, 1994). These strategies include engaging in self serving causal attributions (e.g., taking credit for good outcomes but not bad ones), selectively ignoring or reinterpreting information inconsistent with favourable self views, avoiding situations or people that trigger negative self perceptions, creating positive impressions with other people (e.g., evoking a self-protective presentational style, seeking approval), self handicapping – i.e., providing excuses for anticipated failures (Baumgardner & Arkin, 1988; Baumgardner, Lake, & Arkin, 1985) and anticipating negative outcomes in order to defend against loss of self-esteem in the event of failure (Fiske, 1991)

In addition to needs for accurate self-knowledge and a positive sense of self, theorists such as Swann and Pelham argue that people also strive to maintain consistency in their self impressions (Swann, 1990; Swann, 1996; Swann et al., 1992b). Although individuals may be induced to temporarily entertain hypotheses about themselves that conflict with self-conceptions, Swann argues that such hypotheses tend not to last long (Swann & Hill, 1982). Rather, Swann argued that people seek out and interpret situations, adopt behavioural strategies that confirm their existing self-conceptions, and avoid or resist situations or feedback that yield information at odds with their existing self-conceptions. In Swann's view, people desire stability and predictability above all else, and so, changes to one's self-concept are unwelcome. In a series of experiments, Swann and colleagues showed that individuals use a range of cognitive and behavioural strategies to confirm self-conceptions rather than those that disconfirm them. They found that people tended to perceive more self-confirmatory evidence than actually existed (Swann, 1987), attended to self confirmatory feedback more (Swann & Read, 1981), and preferred others who saw them the way they saw themselves (Swann, Stein-Seroussi, & Giesler, 1992a; Swann et al., 1992b).

Which of these goals operate most strongly when the person is ambivalent about their self-concept? Research by Sedikides (1993) suggested that overall, people are most strongly motivated to acquire self enhancing information, followed by self consistent, and then self diagnostic information. In other words, research has suggested that "people want to resist the loss of esteem at all costs" (Baumeister, 1998, p. 691). However, under conditions of instability or ambiguity regarding one's standing on a dimension (Sorrentino & Roney, 1986; Trope, 1979), research suggests that the quest for accurate feedback appears to be most dominant.

Thus, it appears that individuals who are uncertain about their personal attributes would be motivated to attend to and seek out diagnostic situations that give them the most information about these attributes. In addition, the orientation for accuracy is accompanied by the motivation for self enhancement. It would appear that the symptoms and beliefs relevant to OCD allow for both motivations to be expressed. By regularly screening thoughts and other cognitive events, individuals with OCD engage in determining whether there is evidence for negative conceptions of self. Conversely, by engaging in compulsive rituals, reaching for high standard of moral conduct, behaving responsibly and reducing imperfections, the OCD individual engages in protecting the positive but fragile self-representations from disconfirmation.

5.12 Summary

In this chapter, self-ambivalence was defined in context of several dominant models of the self, and in particular, the social and cognitive frameworks. Self-ambivalence was presented as involving conflicting representations of self, involving both objective and executive components of the self and a product of early dysfunctional attachment patterns with caregivers. In reviewing research on the self constructs, the definition of self-ambivalence was further refined. First, self-ambivalence was defined as multifaceted, pertaining specifically to some personal domains, in addition to one's general appraisal of self. Second, self-ambivalence was presented as a structural feature of the self-concept rather than a particular type of belief. Self-ambivalence was then contrasted to other constructs such as self-esteem, in order to clarify its distinctive

qualities. Finally, the literature on motivation and self was explored. In this literature, ambivalent individuals were cast as seekers of accurate information about themselves, and as protective against negative self views. This literature provided some theoretical justification for Guidano and Liotti's (1983) tenet that self-ambivalence motivates those with OCD to reach closure and certainty about self-worth.

The next chapter examines the roles of self-representation in psychopathology. It provides a context in which to consider the relevance and specificity of self-ambivalence for OCD.

Chapter 6

Self and Psychopathology

In the preceding chapters, self-ambivalence has been portrayed as an important vulnerability factor for OCD. Guidano and Liotti (1983) have argued that ambivalent conceptions of self promote compulsive efforts to protect self-esteem and a range of excessive standards to compensate against underlying uncertainties about self-worth.

Despite the importance credited to self-ambivalence in OCD there are at least three questions that remain regarding the model. First, to what extent is self-ambivalence specific to OCD, compared to types of psychological disorders? Various authors have argued that disturbances in identity and self-worth play a role in the pathogenesis across various forms of psychopathology, ranging from neuroticism (Campbell et al., 1996) to borderline personality disorder (reviewed in Westen & Cohen, 1993). Is there evidence in the literature to suggest that self-ambivalence is specific to OCD?

Second, even though self-ambivalence is presented as a vulnerability factor for OCD, the literature on self and psychopathology suggests a more complex relationship between self-representations and psychological difficulties. Is there any evidence in the literature to suggest that problems with self-representations cause psychopathology? Further, in positing that self-ambivalence is a vulnerability factor rather than an epiphenomenon of the disorder, what implications are there for the treatment of OCD?

Third, if self-ambivalence constitutes vulnerability for OCD, what are the mechanisms by which its influence translates into the symptoms in OCD? Do self-representations directly influence the onset and maintenance of observable symptoms? Or, is the relationship between self-representations and symptoms mediated by dysfunctional assumptions and belief structures? In this chapter, it is argued that the relationship between self-ambivalence and OCD is mediated by other cognitive structures.

This chapter reviews the literature that implicates the self-concept in anxiety disorders, personality disorders, and depression. The review is confined mostly to cognitive theories of psychopathology, because the cognitive model explicitly includes schemas about self as pathogenic contributors to maladjustment (Beck & Emery, 1985) (Beck, Rush, Shaw, & Emery, 1988).

Following from this review, the chapter focuses on how self-ambivalence and related notions may be relevant to a range of psychological difficulties aside from OCD. This discussion casts self-ambivalence as a general disposition for psychological problems, rather than as specific vulnerability for OCD. Second it addresses the issue of causality between self-constructs and psychopathology. It is argued that, even though self-ambivalence may be construed as a consequence of OCD experiences, there is evidence to support the consideration of self-ambivalence as vulnerability for OCD problems. Finally, this chapter examines the mechanisms by which core schemas about self are purported to lead to symptoms of psychological disorders.

6.1   The Self-Concept and Psychopathology

The relation between the self-concept and vulnerability to anxiety, depression, and personality disorders has been the focus of much interest in psychological theories (reviewed in Eells, Horowitz, Stinson, & Fridhandler, 1993; Segal & Blatt, 1993; Segal & Muran, 1993). This section reviews research on the role of the self-concept in the development and maintenance of depression, some anxiety disorders and some personality disorders. This review identifies both the content and structure of self-concept as relevant to the psychopathology.

6.1.1   Self and Depression

Cognitive theories of depression have postulated that stable cognitive characteristics confer vulnerability to stress and depression. These theories implicate dysfunctional schemas and attitudes about the self in vulnerability to depression (Beck, 1967; Blatt,

1974). In their review on the self-concept in depression, Strauman and Kolden (1997) observe that theories of depression have implicated at least three features of self-representations in the vulnerability for the disorder: self-esteem, self-schemas and self-inconsistencies. Other authors have implicated self-complexity as a significant feature of the self-concept that protects against depression (Linville, 1985; Linville, 1987). Each of these four features will be discussed in relation to depression, before turning to a discussion of the self-concept in other disorders.

Poor self-esteem is a cardinal feature of clinical depression. It is one of nine criteria for a diagnosis of major depressive disorder (American Psychiatric Association, 1994) and a dominant feature of certain subtypes of depression. Operating from a psychoanalytic and cognitive developmental perspective, Blatt and colleagues distinguish introjective depression from anaclitic depression, as characterised by self-criticism and feelings of unworthiness, inferiority, failure and guilt (Blatt, 1974; Blatt, D'Affitti, & Quinlan, 1976; Blatt & Zuroff, 1992). Indeed, a large number of studies have shown self-criticism and low self-esteem to feature strongly in some presentations of clinical depression (Blatt & Zuroff, 1992).

There is also a compelling argument for the role of self-esteem in predisposing individuals to depression (Andrews & Brown, 1993). A growing body of research has indicated that low self-esteem constitutes a significant risk factor for depression, contributing both to the onset, maintenance and recurrence of depressive episodes (Roberts & Monroe, 1994; Strauman & Kolden, 1997). For example, in a series of retrospective and prospective surveys, Brown and colleagues demonstrated that chronic low self-esteem was statistically related to vulnerability for depressive episodes (Brown, Andrews, Harris, Adler, & Bridge, 1986). These researchers found that low self-esteem preceded the onset of an initial depressive episode. In another prospective study, Zuroff and colleagues found that after controlling for initial levels of depression, self-criticism predicted introjective depressive symptoms 12 months later (Zuroff, Igreja, & Mongrain, 1990). Research on the impact of negative mood on the self-concept will be addressed later in this chapter.

The notion of self-schema has also been widely studied in relation to depression (see Strauman & Kolden, 1997). Self-schema refers to the representation of an individual's prior experiences and associated knowledge typically organised around some theme or core beliefs (e.g., "people who are close to me will disappoint me", "I will never be happy", "I am not worthy or love"). These schemas constitute core beliefs that are expressed as a set of absolutist and punitive statements about the self (Greenberger & Padesky, 1995). When activated by critical adverse events (e.g., divorce, losing one's job, conflict), self-schemas have been hypothesised to exert significant influence on information processing by shaping the individual's expectations and appraisals about ongoing and future events (Strauman & Kolden, 1997). There has been substantial support for the relationship between negative self-schemas, information processing biases and depressed mood (Segal & Muran, 1993). Research has also suggested that this relationship is reciprocal – that is, negative self-schemas became more elaborate and primed by negative mood states (Davis & Unruh, 1981).

Within cognitive theories about self and depression, emphasis has also been placed on the role of conflict, inconsistency or discrepancy within the self. In these theories, it is suggested that holding conflicting beliefs about the self (e.g., one's attributes, values, goals, and beliefs) is intolerable, and associated with negative affect. For example, researchers have demonstrated that depression is related to inconsistencies between the individual's actual and ideal self-concepts (Strauman & Higgins, 1988). Kernberg (1975) emphasised that splitting – i.e., the tendency to oscillate between positive and negative representations of self and others – is central to a wide range of severe pathology. In support of this, reliable correlations have been found between a measure of splitting and measures of depression, negative affectivity and self-esteem (Gould, Prentice, & Ainslie, 1996). A further study found that poor psychological integration – i.e., a tendency to see oneself as having different personality characteristics in different social roles – was associated with poorer emotional adjustment and depression (Donahue et al., 1993). Other authors have suggested that individuals with low self-esteem have inconsistent views of the self (e.g., Campbell, 1990) and that it is this incoherence in self-view that constitutes vulnerability for negative mood states (Campbell & Lavallee, 1993).

Finally, self-complexity has also been related to vulnerability for depression (Linville, 1987). As defined by Linville, self complexity jointly describes the number of one's self aspects (e.g., social roles, traits, goals), and the differentiation amongst them – that is the extent to which one's appraisals of particular self-aspects do not 'spill over' to other self-aspects (p. 664). An individual who is high in self-complexity is said to be more likely to have a wide range of roles in his or her repertoire, and thus, when negative feedback affects one of these self roles, he or she has a wide range of alternative roles to fall back on (Linville, 1987). In contrast, an individual who is low in self complexity does not have this range of alternative roles available, and so experiences greater swings in affect. Many studies have demonstrated that individuals high in self-complexity are less prone to depression and illness following high levels of stress (Kalthoff & Neimeyer, 1993; Linville, 1987; Niedenthal, Setterlund, & Wherry, 1992). However, in some studies, support for the stress-buffering effect of self complexity has been equivocal (Hershberger, 1990; Rafaeli-Mor & Steinberg, 2002.; Solomon & Haaga, 2003).

6.1.2   Self and Anxiety Disorders

In contrast to the depression literature, there has been less rigorous theoretical and empirical examination of the relationship between self-concept and anxiety disorders. Consequently, there is poor understanding about how individuals with anxiety disorders think about themselves.

From a cognitive-behavioural perspective, individuals with anxiety disorders are said to view themselves as vulnerable to, and inadequately prepared for, potential dangers (Beck & Emery, 1985). For Beck and Emery, vulnerability for anxiety disorders involves

> …a person's perception of himself as subject to internal or external
> dangers over which his control is lacking or is insufficient to afford him
> a sense of safety. In clinical syndromes, the sense of vulnerability is

magnified by certain dysfunctional cognitive processes. A patient underestimates the positive aspects of his personal resources…He is inclined to focus primarily on his weaknesses (pp. 67-68).

Central to the cognitive model of anxiety disorders is the notion that the self is seen as vulnerable to danger. This model has failed to explicitly address the question of whether some types of self-views confer a specific vulnerability for certain types of anxiety disorders. However, some theorists have begun to identify important differences in self-perceived vulnerabilities across some anxiety disorders. For instance, Beck and Emery (1985) suggest that patients with GAD view themselves as incompetent across a range of important domains and negatively evaluate their ability to cope with a range of problems and issues such as finances, health and relationships. In contrast, they propose that patients with panic disorder, agoraphobia or social phobia have more restricted views about their vulnerabilities and inadequacies. The patient with panic disorder or agoraphobia is said to be specifically concerned about mental or physical collapse and therefore to construe themselves as "vulnerable to unpredictable and dangerous bodily sensations" (McNally, 1993, p. 84). In contrast the socially anxious person is depicted as particularly uncertain about his or her acceptability, and sees himself or herself as lacking in resources to meet social demands (Clark & Wells, 1995; Hirsch, Clark, Mathews, & Williams, 2003; Hope, Rapee, Heimberg, & Dombeck, 1990).

Recently, there has been some focus on the nature of self-concept in PTSD. McNally (1993) proposes that many of the symptoms in PTSD can be understood as the result of alterations to self-representations following traumatic experiences. In his view, encounters with trauma can destroy a person's illusion of self as secure and invulnerable to threat. He suggests that, following a traumatic incident, the person comes to see themselves as no longer immune to danger. This revision in self-view is purported to underscore many of the symptoms of PTSD such as fears of recurrence of the trauma, chronic anxiety, hypervigilance, and a sense of foreshortened future.

Similarly, Janoff-Bulman (1989) argues that individuals generally operate on the basis of important assumptions about the world and self, that go unquestioned and

unchallenged. However stressful life events can dramatically change these strongly held assumptions. Such change is said to be responsible for the victim's intense feelings of vulnerability. Jannoff-Bulman proposes that several assumptions are challenged by the traumatic event, including one's perceived benevolence of the world, meaningfulness of the world and specific assumptions about self. Assumptions about self that are said to be altered following trauma include (a) beliefs about one's self-worth, morality and decency, (b) beliefs about one's capacity to control outcomes, and (c) beliefs about oneself as luckily protected from harm.

Some theorists have also suggested anxiety disorders reflect unstable views about self, and underlying irreconcilability between contradictory views about the self. For example, Clark and Wells (1995) suggest that individuals with social anxiety have extremely uncertain views of themselves, and therefore base their sense of self-worth on the reactions of other people. Other authors suggest that patients with PTSD experience considerable distress because of inconsistencies between irreconcilable images of self before and after trauma (March, 1990). Further, operating within the self-discrepancy framework, Strauman and Higgins (1988)propose that the discrepancy between actual and "ought" self-views is generally associated with agitation and anxiety related outcomes.

6.1.3   Self and Personality Disorders

Disturbance in identity has been implicated in Borderline Personality Disorder (BPD), Narcissistic Personality Disorder (NPD) and OCPD. Identity disturbance represents one criterion for BPD (American Psychiatric Association, 1994). As summarised by Westen and Cohen (1993), this disturbance refers to a range of problems in maintaining consistency in roles and self-representations. These problems include a lack of consistent goals, values and ideals and relationships, the tendency to make temporary hyper-investments in roles, value systems, world views and relationships that ultimately break down, a sense of emptiness and meaninglessness, gross inconsistencies in behaviour over time and across situations. Numerous theorists have suggested that such difficulties derived from the lack of integration in self-views. According to Kernberg

(1986), patients with BPD fail to integrate positive and negative representations of self. As a result of such difficulties, it is maintained that these patients experience shifting views of themselves and a sense of inner emptiness. Adler and Buie (1979, in Wilkinson-Ryan & Westen, 2000) also have implicated self-fragmentation in the development of BPD. These theorists have argued that the individuals with BPD lack the ability to internalise many aspects of their primary caregivers, resulting in incoherent experiences of self.

In support of these assertions, Wilkinson-Ryan and Westen (2000) found that identity disturbances were more pronounced for patients with BPD than for patients with other personality disorders. The authors devised a specific questionnaire called the Identity Disturbance Questionnaire (IDQ). These items were based on theoretical models of identity, the literature on dissociation and comments by patients with BPD about their own identity. A number of clinicians completed the questionnaires about their clients. This study found that patients with BPD were distinguished from other patients on various aspects of identity disturbance, including a subjective lack of coherence between self-views. However, given that the ratings were provided by clinicians rather than patients, it is feasible that the results of this study reflect clinicians' biases about the nature of BPD rather than the presence of conflictual experiences of self in BPD.

NPD, defined descriptively as a pattern of grandiosity, self-focus and self importance (American Psychiatric Association, 1994) has been construed as a pervasive attempt to protect a vulnerable, fragile self-concept (Morf & Rhodewalt, 2001). Morf and Rhodewalt argue that underlying the exterior of grandiosity and entitlement in patients with NPD, is a negative, unstable and poorly differentiated self-concept. According to these theorists, narcissists seek continuous self-affirmations from their interpersonal relationships. However, due to their insensitivity and self-absorption, these patients negatively influence personal relationships and in the long run, undermine their attempts for self-affirmations. The result is 'a chronic state of "self under construction" (p. 178).

OCPD has also been related to dysfunctional beliefs about personal competence and self-worth. According to cognitive theorists, patients with OCPD are said to

overcompensate for low self-esteem through overachievement (Millon & Davis, 1996). They are perfectionists, and often exhibit an inflated sense of personal responsibility resulting in extremes of worry, morality and scruples. They overestimate the need for self-control, and thus come across to others as dogmatic, opinionated and inflexible.

According to Kyrios (1998a), these patterns of control, perfection and criticism emanate from at least five core belief domains about self, others and the world. First, based on Guidano and Liotti's (Guidano & Liotti, 1983) framework, Kyrios suggests that those with OCPD are uncertain about their own inherent regard and self-worth, and thus are compelled to constantly establish themselves as worthy and acceptable. Second, obsessive compulsives are said to lack trust in themselves and the external world. They mistrust themselves as worthy of love, and lack conviction that others are capable of providing nurturance and appropriate gratification. Consequently, the patient feels unable to rely on the external world for the provision of biological and emotional needs, and compensates by becoming overly independent or dependent, by establishing unattainable goals, by constantly checking himself or herself or others and by establishing and adhering inflexibly to rules and regulations. Third, given the lack of a secure base on which to develop tolerance for uncertainty, these individuals purportedly desire constant control over themselves and their environment. Underestimating their capacity to deal effectively with complexity and uncertainty, the patient feels threatened by chaotic and unpredictable situations. Fourth, borrowing from the work of Erickson (1950/1985), Kyrios proposes that patients with OCPD fail to acquire roles that allow them to be flexible and adaptive to changing environmental, developmental and personal circumstances. Through procrastination and control, patients with OCPD oscillate between extreme diffusion or cohesion in their acquired roles. Finally, it is proposed that these patients strive towards self-acceptance by adhering to rules and regulations, particularly those relating to morality and responsibility. The moral high ground is said to compensate for an ambivalent self-image as it allows for identification with external authority against a perceived hostile social world.

6.1.4   Interim Summary

At least two aspects of the self-concept have been nominated as pathogenic for depression, anxiety and personality disorders: the content of self-concepts (i.e., types of beliefs about the self, the positivity or negativity of these beliefs), and the structure of self-concept (i.e., the coherence of the self-concept, certainty of beliefs about the self, and self-complexity). Beliefs about self that are pathogenic include: low self-esteem, and representations of self as inadequate, helpless, vulnerable, untrustworthy, and defective. Structural aspects of self that have been related to psychopathology include: the consistency and integration of self views, the discrepancies between actual and preferred selves, the level of conviction and stability of self-views.

Guidano and Liotti's (1983) model of OCD is an example of a structural theory of the relation between self and psychopathology. In this model, the actual contents of self-concept are less important compared to the existence of conflicting self-concepts. The model does not portray the self-concept of individuals with OCD as dominated by negative conceptions of self, morality or acceptability. As elaborated in chapter 4, it is the lack of clarity about such attributes that characterises their self-concept. The motivation in OCD is to regulate the experience of conflict and to achieve an ideal representation of self as moral and lovable.

In what way are Guidano and Liotti's formulation distinct from others that have implicated the self-concept across a range of psychological problems? Further, to what extent does the literature support the causal inferences made in Guidano and Liotti's theory? What mechanisms may mediate between self-concept and OCD? The next few sections address these questions.

6.2   *Specificity of Self-Ambivalence to OCD*

To date, no research has explored whether self-ambivalence is specific to OCD. As reviewed, the literature does not support a strong argument that self-conflict, poor self-esteem or uncertain self views distinguishes between diagnostic groups. Despite assertions that anxiety and depression are respectively related to different types of self-discrepancies (Higgins et al., 1985; Strauman, 1989), these claims have not met with

consistent empirical support (Ozgul, Heubeck, Ward, & Wilkinson, 2003; Tangney, Niedenthal, Covert, & Barlow, 1998; Veale, Kinderman, Riley, & Lambrou, 2003). Likewise, despite suggestions that patients with panic disorder, social phobia and GAD perceived themselves as having different vulnerabilities (Beck & Emery, 1985), it is surprising that there is no research that has explicitly compared their self-beliefs. At best, notions such as poor self-esteem, uncertain self-concepts, and self discrepancy may be characterised as general predisposing factors, rather than specific vulnerabilities for psychological disorders (McNally, 1993).

Perhaps certain types of conflicts are more relevant to patients with OCD than to other patient groups. For instance, Guidano and Liotti (1983) propose that patients with OCD are particularly ambivalent about personal morality and lovability. So, instead of asking whether self-ambivalence is specific to OCD, a more precise question would be to ask whether ambivalence about personal morality is specific to OCD. Likewise, to what extent are OCD patients more insecure about their acceptability, compared to other patient groups?

6.3   Causality, Self and Psychopathology

Even though problems with self-concept have been associated with vulnerability to various psychological disorders, to what extent does the self-concept contribute to the aetiology and maintenance of emotional problems? Self-representational disturbances may merely constitute epiphenomena of the disorder, with no role in causing or maintaining the disorder itself (McNally, 1993).

There are at least three ways to conceptualise the relationship between self-representations and psychological problems (Fennell, 1997). One view is that certain representations of self constitute a major vulnerability factor for particular psychological problems. In this view, premorbid self-pathology increases the likelihood that the person will go on to develop specific psychological problems. This view is consistent with the traditional cognitive model of psychopathology which emphasises that negative emotions result from underlying cognitive vulnerability (Beck, 1967;

Bedrosian & Beck, 1980). The primacy of cognitions and negative self-schemas in depression have been supported by findings that such cognitions predict prospective negative mood (Segal, 1988), and that low self-esteem precedes the onset of depression (Andrews & Brown, 1993) and OCD (Fava et al., 1996).

Alternatively, another view regarding the relationship between self-concept and psychopathology is that dysfunctional self-views are consequences rather than causes of psychological problems or distress. There is compelling evidence that negative self schemas may only be activated after the onset of depressive episodes (Kuiper, Olinger, MacDonald, & Shaw, 1985; Lewinsohn, Steinmetz, Larson, & Franklin, 1981). In fact, sufferers of depression or anxiety may regard their value as a person as diminished because of their inability to realise their full potential (Riso & Newman, 2003). As surmised by Fennell (Fennell, 1997, p. 7) "…a long standing anxiety disorder might in the end lead to a general loss of self confidence even in a person who had originally had quite a positive and realistic self-concept…". Thus, the person's conception of self can be clearly modified by the existence of psychological difficulties.

A third view is that a pathological representation about oneself is one aspect of the psychological disorder. For example, low self-esteem is one of the nine symptoms that constitute a depressive episode; grandiose conceptions of self are essential to the diagnosis of NPD; and unstable identity is part of the diagnostic criteria of BPD. In these examples, the presence of pathologies in self may be neither cause nor consequence of the disorder, but rather part of the phenomenology that characterises the disorder.

In fact, given that these three accounts of the relationship are not entirely mutually exclusive it is helpful to consider all three patterns in the relationship between the self-concept and the emotional disturbance. Pathological self-conceptions may constitute vulnerability for the development of emotional distress, but such distress may also have an effect on these conceptions. In short, the relationship between self-concept and symptoms of a disorder is reciprocal. In addition, the pathological self-views may become increasingly problematic in themselves, thus meeting diagnostic threshold.

Therefore, the view that self-conceptions are involved in the vulnerability and maintenance of psychological problems is not inconsistent with the other two views.

Identifying self-concept as a potential vulnerability factor has implications for treatment strategies (Ehntholt et al., 1999; Kyrios, 1998a; Riso & Newman, 2003; Strauman & Kolden, 1997). For example, if self-ambivalence is a vulnerability factor for OCD, then it may need to be addressed in treatments for OCD, including those that purport to prevent relapse (this proposition is explored further in chapter 10). Indeed there have been similar suggestions in the literature with respect to depression. Research has found that under a negative mood induction remitted depressed individuals endorse a greater number of dysfunctional attitudes than do never depressed individuals (Miranda, Persons, & Byers, 1990). Therefore, authors have emphasised the need to address beliefs about self and self-esteem in order to reduce depression and recurrence of depressive episode (Roberts & Monroe, 1994; Tarlow & Haaga, 1996). Strauman and Kolden (1997) summarise this position saying "…there can be no doubt that psychotherapy for depression must include a focus on the role of self in the client's suffering" (p. 17). They conclude "the challenge is not simply to reduce depressive symptoms, but to facilitate change in those facets of the self that cause or maintain the individual's distress" (p. 18).

6.4   *Mechanisms of Action Between Self-Concept and Psychopathology*

Assuming that the self-concept plays a part in the genesis of emotional distress, what might be the mechanisms by which it influences the manifestations of symptoms of the disorder? Several theories have been offered to address the question of how negative self-concepts predispose individuals towards depression or anxiety. Firstly, some theories have highlighted the role of overt behaviours in mediating between negative self-concepts and mood. For example, individuals with low self-esteem may play an active role in creating their own difficulties (Swann et al., 1992b). According to Swann and colleagues, such individuals alienate others, prefer partners who think poorly of them, and elicit negative feedback. These behaviours deprive the individual of the buffering effects of social support, and thus contribute to the maintenance of negative

self-concepts and depression. Some empirical support is available for this perspective (Swann & Read, 1981; Swann et al., 1992b). For example, research has found that individuals with higher self-esteem engage in more enjoyable leisure activities than individuals with lower self-esteem (Cheng & Furnham, 2003).

Secondly, some models of psychopathology have suggested that dysfunctional assumptions, beliefs and information processing biases may mediate the relationship between self-representations and symptoms. Indeed, Beck's cognitive model of depression is an example of a model that frames cognitions as hierarchically organised (Beck, 1967). In Beck's model, negative self-schemas do not directly precipitate depressive affect. Rather, self-schemas are purported to trigger a series of lower order cognitive products and processes such as dysfunctional assumptions, negative automatic thoughts, and biases in attention, memory, and processing. These lower order "cognitions" precipitate the resulting depressive phenomena (Strauman & Kolden, 1997).

Similarly, Guidano and Liotti (1983) approach obsessional problems from a perspective that emphasises the hierarchical relationships between cognitive structures (see chapter 4). Self-schemas are conceived as the central aspects of knowledge organisation and, as such, govern other cognitive and emotional structures (e.g., perceptions, interpretations, beliefs). In emphasising that cognitions are arranged in hierarchical structures, their model has been referred to as "hierarchical structuralism" (Liotti, 1989, p. 38). Thus, self-ambivalence in OCD may not directly lead to symptoms of OCD. Rather it may foster the development of cognitions that mediate between the underlying experience of self and surface expression of symptoms. As argued in chapter 4, OCD related beliefs might constitute such mediatiatory variables. Having conditions for self-worth (e.g., I must be perfect in order to be worthwhile, I must be responsible in order to be accepted by others, I must never have immoral thoughts, in order to be virtuous) may provide some relief against the sense of conflict between opposing possibilities of self. However, with increasing levels of self-ambivalence, these rules can become more rigid, resulting in pathological behaviours and cognitive scrutiny, consistent with OCD.

6.5 Summary

A wide range of self-related constructs have been implicated in models of vulnerability for depression, anxiety and personality disorders. While most theorists have focussed on the contents of self-concept as important for models of vulnerability, some have also implicated the organisational or structural features of the self-concept as central to vulnerability for distress. Within this context, the self-ambivalence model of OCD appears to be more strongly informed by a structural perspective to psychopathology.

No research has explored whether self-ambivalence is specific for OCD. Conflicts about self-worth, self-ambivalence and identity confusion have been implicated in a range of psychological difficulties aside from OCD. To date, the literature does provide strong support for an argument that self-conflict, poor self-esteem or uncertain self-views distinguishes between diagnostic groups. However, research has yet to investigate whether individuals with OCD are more ambivalent about specific aspects of self-worth – such as personal morality and lovability – compared to other clinical groups.

Finally, this chapter examined the causal relations between self-views and the mechanisms that mediate between core conflicts about self and symptoms of psychological disorders. Difficulties with self-views have been construed in the literature as cause, consequence and epiphenomena of psychological disorders. However, as evidenced in the depression literature, there may be advantages to dealing with the self as vulnerability rather than simply epiphenomenon, particularly in the area of psychological treatment. It was proposed that in Guidano and Liotti's model of OCD, self-ambivalence is situated within a hierarchical structure of cognitive products and processes, and exerts its influence on OCD through various lower-order belief domains.

Chapter 7

This Thesis

The purported relationships between self-ambivalence and OCD symptoms and related beliefs have not been empirically investigated. There are four issues that remain unresolved in the empirical literature with respect to this question of whether self-ambivalence contributes to the processes and symptoms in OCD.

First, despite the existence of a range of measures on self-esteem and self-clarity, there is no measure that specifically addresses the types of deficits implicated in Guidano and Liotti's construct of self-ambivalence, particularly regarding moral attributes and around self-perceptions of lovability. Given the theoretical distinctions between self-ambivalence and other self-related concepts, as reviewed in chapter 5, there is a need for a measure of self-ambivalence in order to evaluate Guidano and Liotti's theory of OCD. Chapter 8 (Study 1) addresses the development of a new measure of self-ambivalence.

Second, there is no study that has specifically explored the relationship between self-ambivalence and OCD phenomena. Little is known about whether OCD symptoms and related beliefs are associated with self-ambivalence, and the pathways through which self-ambivalence may be instrumental to the unfolding of OCD symptoms. Chapter 9 (Study 2) explores the interrelationships between self-ambivalence, OCD-related beliefs and OCD phenomena.

Third, no study has examined whether self-ambivalence constitutes a specific vulnerability for OCD, or is a general vulnerability factor. Disturbances in identity and self-evaluation have been implicated in a range of personality, anxiety and mood disorders. Therefore, in addition to exploring the interrelationships between self-ambivalence and OCD symptoms and related beliefs, Chapter 9 (Study 2) examines whether self-ambivalence is a specific vulnerability for OCD in contrast to other anxiety disorders.

Finally, even though it has been postulated that effective psychological treatment is based on changes in self-concept, no study has tested whether the alleviation in OCD symptoms is mediated by changes in self-ambivalence. Further, even though some authors have argued that relapse of depressive symptoms may be related to the extent to which dysfunctional ideas about self are unresolved, no study has explored whether this also applies to OCD. Chapter 10 (Study 3) investigates the extent to which the resolution of self-ambivalence is related to the alleviation and relapse of OCD symptoms following CBT.

In summary, three studies were conducted. In the first study, a psychometric measure of ambivalent self-worth was developed and validated. The second study examined the relationships between ambivalent self-worth, OCD symptoms and OCD-related beliefs in non-clinical and clinical populations. It also explored whether self-ambivalence was specific to OCD, compared to other anxiety disorders. The third study investigated the importance of self-ambivalence in the recovery and relapse of OCD symptoms.

Chapter 8

Study 1: The Construction of the Self-Ambivalence Measure

8.1   Introduction

A variety of methods are employed to assess the self-concept. These methods include semantic differentials, adjective checklists, drawing tasks, Q-sorts, projective tests, actual-ideal measures, third-party reports and questionnaires (Brimthaupt & Lipka, 1992). The most widely used technique for assessing self-concept is the self-report questionnaire (Keith & Bracken, 1996). However, questionnaires on the self-concept have been criticised for poorly attending to the context dependent self-concept (Safran et al., 1990) and to the personal meanings constructed about self (Yardley, 1987). Further, despite the proliferation of self-concept instruments, relatively few have been thoroughly developed, published or widely used in research or clinical practice (Keith & Bracken, 1996; Wylie, 1974). As lamented by Hattie (Hattie, 1992, p. 140), "there seems to be as many measures of self-concept as there are researchers on the topic". Finally, in spite of the existence of numerous questionnaires measuring appraisals about self, none to date have measured self-ambivalence.

This chapter describes the development and evaluation of the Self-Ambivalence Measure (SAM), an instrument designed to measure Guidano and Liotti's (1983) notion of self-ambivalence. First it addresses the question of whether Guidano and Liotti's concept can be viably assessed by explicit methods of assessment such as a self-report questionnaire. It explores the possibility that self-ambivalence may remain outside of the person's awareness, and may elude methods that require explicit reporting by the person. Using frameworks provided by Markus and Kunda (1986), and Guidano (1987), it justifies that some aspects of self-ambivalence may also be experienced at an explicit level of consciousness and may therefore be assessed by questionnaire.

Second, the chapter provides an operational definition of self-ambivalence that informs the development of items for the SAM. Self-ambivalence is defined as an impression of self that is conflicted, uncertain and a source of preoccupation. Given that individuals with obsessional disorders are said to organise their sense of self-worth around moral imperatives and social approval (Guidano and Liotti, 1983), these domains are operationalised.

Third, in order to provide a justification for the development of this measure, a review is provided on current questionnaires that measure fragile or insecure self-construals. The review concludes that these measures inadequately address key aspects associated with the notion of self-ambivalence, thus justifying the development of a more specific measure of self-ambivalence. Fourth, a description is provided for the development of an item-pool for SAM. Finally hypotheses relating to the SAM's factor structure and construct validity are justified.

8.1.1   Is Self-Ambivalence Implicit?

To what extent are individuals unaware of the stability, uncertainty or ambivalence of self-regard? The answer to this question has important implications for the assessment of self-ambivalence. If self-ambivalence is implicit – that is outside of the person's awareness – assessment methods such as questionnaires that rely on self-disclosure are unlikely to tap into the construct. Numerous theorists have argued that self-report measures are prone to social desirability biases, and thus are inaccurate devices for measuring how individuals really feel about themselves (Kernis, 2003). For instance, Wilkinson-Ryan and Weston (2000) say that "patients would likely have difficulty providing accurate information about their tendency to hold contradictory beliefs, their over absorption in particular roles, and so forth" (p. 539). Likewise, Brinthaupt and Erwin (1992) consider that individuals with contradictory beliefs about self may only be aware of some of these beliefs. Thus, if self-ambivalence is implicit,

then it is inappropriate to use methods that rely on deliberate reflections about self[2] (Bosson, Swann, & Pennebaker, 2000).

Unfortunately, Guidano and Liotti (1983) do not clearly identify self-ambivalence as implicit or explicit. A liberal interpretation of their writings suggests that self-ambivalence exists at both an implicit and explicit level of awareness. Guidano (1987) explains that implicit knowledge includes feelings, images, personal identity and motor patterns that the individual is not aware of, but which can influence the person's behaviour, emotions and cognition. Similar to the notion of schema, the implicit self-concept contains organising principles that influence the processing of ongoing experience and give a sense of continuity to one's experience (Guidano, 1987). However, he also stresses that such information exists on an explicit level. Accordingly, he proposes that individuals can become aware of their conflicting self-representations, and the associated sense of threat to self-cohesion.

How is explicit self-concept related to implicit schemas about self? Markus and Kunda (1986) provide a framework that helps understand the relationship between implicit and explicit representations of self. They propose that invividuals' explicit self-concept at any one time is the result of contextual characteristics (e.g., salient features of the individuals current activity, role, relationships), but also of one's repository of self-concepts. They suggest that the explicit self-concept reflects this repository of stored impressions about the self. Accordingly, Guidano (1987) states "…the individual, at any moment and according to particular environmental influences, has a perceived identity that represents…(an) example of his/her range of possible self images" (p. 86).

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[2] A variety of strategies can be used to assess aspects of self-construal that are outside immediate conscious awareness. Cognitively oriented researchers have used priming techniques such as word association tasks, or Stroop paradigms to assess automatic cognitive operations relating to the self-concept. Clinically, such tacit schemas are detected by observing patterns in the client's reactions and behaviours over time, across situations and in response to stressful events . Other researchers in the literature have used third party expert ratings to assess representations of self .

Based on these statements, it is suggested that ambivalence about core aspects of personal identity penetrates conscious images of self. For example, recall the scenario described in chapter 4, where someone is walking along the street, and notices a fallen branch. The person may choose to ignore the branch, and to continue walking. However, for the individual with conflictual notions of self, this situation may prime the individual's awareness of competing working self-conceptions. The individual may see him or herself as virtuous should he or she remove the branch, or as immoral, should he/she do nothing to prevent harm. By acting in a particular way, the individual chooses amongst these rival conceptions of self, thus temporarily resolving ambivalence about personal attributes. Thus, although the person may not be constantly ambivalent about their morality, they become primed to reflect on it when exposed to certain salient conditions. The working self-concept becomes "infected" by ambivalence.

8.1.2   An Operational Definition of Self-Ambivalence

Given the assumption that individuals can become aware of self-ambivalence, what aspects of their experience should be measured? As elaborated in chapter 4, individuals with self-ambivalence are purported to experience their self in at least three ways. First, ambivalent individuals are said to have difficulty synthesising self-views into a coherent picture of self. Guidano describes this image of self as a "non-articulate view" (1987, p. 177).

Second, in order to resolve such uncertainty, these individuals are said to engage in the continuous redefinition of self, and to adopt extreme views about the self. The tendency to show extreme convictions about self in order to defend against personal uncertainty has been demonstrated in a study by McGregor, Zanna, Holmes and Spencer (2001). These researchers found that when confronted by personal uncertainty, people heighten their conviction about personal attitudes and values. In ambivalent individuals, this pattern of "attitude hardening" would result in oscillations from one extreme to another in self-regard, resulting in "split patterns of self-recognition", (Guidano, 1987, p. 181). They are said to appraise themselves in dichotomous categories such as 'good', 'bad', 'lovable' and 'unlovable'.

Finally, riddled with a sense of uncertainty and a dichotomy in self-appraisals, these individuals engage in a continual search for their authenticity and the "true nature of things and the right way to behave" (Guidano & Liotti, 1983, p. 264). They chronically monitor their behaviour, attributes and social image, for evidence to support their idealised or negative images of self. However, as noted in chapter 5, the search for authenticity is motivated by anxiety rather than by intellectual curiosity about self, and thus is ruminative rather than reflective in nature (Trapnell & Campbell, 1999).

In summary, self-ambivalence is operationalised as the extent to which the self-concept is unresolved, perceived in terms of dichotomies and the focus of excessive personal preoccupation.

8.1.3   Operational Definitions of Morality and Lovability

Given the importance placed on morality and lovability for self-esteem in those with OCD (Guidano and Liotti, 1983), any assessment of self-ambivalence in individuals with OCD should ideally tap into both these domains of the self-concept. However, what does it mean to be lovable or moral?

In Guidano's (1987) writings, it is suggested that personal morality involves a "sense of responsibility and the needs for sacrifice in order to face responsibility" (p. 175). He suggests that this sense of responsibility is expressed by "seeking justice, equity, truth" (p. 180). Therefore, moral self-concept, as employed by Guidano refers to the sense of self as responsible, sacrificing and acting in the service of human welfare. This definition is consistent with those provided by other theorists, who define morality as a commitment to promote or protect the welfare of others (Hart, Atkins, & Ford, 1998). Given that different people may regard different personality features as central to morality (Blasi, 1984), we operationally define morality in broad terms, as one's personal commitment towards the welfare of others.

Guidano and Liotti (1983) do not define what they mean by lovable. However, within the broader context of their model, lovability is used to describe the extent to which the individual feels secure about being loved by his or her parents, about being accepted without conditions, and about being approved. In fact, borrowing from theorist such as Adams (1973) and Salzman (1968), Guidano proposes that gaining approval from other people becomes the primary way for the obsessive-compulsive individual to achieve a sense of self-worth. Thus, in this thesis, lovability is defined as one's personal estimate about one's acceptance and approval by others. This domain of self-esteem has been referred to in the literature as social self-esteem (James, 1890) and love-worthiness (Coopersmith, 1967).

8.1.4   *Review of Measures Related to Self-Ambivalence*

There are several questionnaires that measure one's experience of uncertainty, conflict and preoccupation associated with the self. However, these questionnaires do not adequately capture Guidano and Liotti's (1983) concept of self-ambivalence, with respect to a number of important factors.

First, these questionnaires do not conceptualise these qualities as relating to a common underlying rupture in self-regard. Therefore, they assess each quality separately. For example the Rumination-Reflection Questionnaire (Trapnell & Campbell, 1999) measures anxious and inquisitive reflections about self, but does not address the lack of certainty in self-appraisals. The Splitting Index (Gould et al., 1996) assesses the extent to which self-definition is conflictual and therefore addresses the tendency to categorise the self in terms of extreme descriptions. However, it does not measure related aspects of self-ambivalence such as self-uncertainty or self-preoccupation. Conversely, the Self-Clarity Scale (Campbell et al., 1996), measures the extent to which self-related beliefs are clearly defined and internally consistent. However it does not assess the tendency to ruminate about self-attributes. Thus, although various self-report instruments measure aspects of self-ambivalence, there is no single questionnaire that addresses all three features essential in self-ambivalence.

Second, underlying the development of these questionnaires is the assumption that the self-evaluation is applied globally to the self. This assumption is inconsistent with Guidano and Liotti's multidimensional model of self, which highlights particular self-domains of vulnerability in OCD. Existing questionnaires have not been developed to specifically measure moral and social approval domains of self-worth. Questionnaires such as the Self-Concept Clarity Scale, Splitting Index, and Rumination-Reflection Scale measure self-clarity with respect to a global construct of self, rather than in specific self-domains. Similarly, the Stability of Self Scale (Rosenberg, 1979), which measures the tendency for appraisals of self-worth to fluctuate over time are based on a global conceptualisation of self-esteem rather than domain specific views of self.

A third problem with existing questionnaires is that they have not been adequately validated for their independence from measures of self-esteem and general indecisiveness. As reviewed in chapter 5, the relationship between self-uncertainty and self-esteem remains equivocal. While conceptually, self-uncertainty is different from self-esteem (Harris & Snyder, 1986; Pelham & Swann, 1989), psychometrically, the measures of self-esteem lack discriminative validity with respect to measures of self-uncertainty (Campbell & Lavallee, 1993; Tice, 1993). Further, given that self-ambivalence reflects difficulties in reaching a decision about self-worth, it would be important to have a measure that is adequately distinct from measures of broader decision-making difficulties. Existing measures of self-uncertainty have not been validated in order to maximise their independence from measures of indecision.

In summary, from a psychometric standpoint it appears useful to have a measure that can isolate the construct of self-ambivalence from broader constructs such as self-esteem and decision making difficulties. A psychometric measure on self-ambivalence must demonstrate discriminant validity in relation to measures of self-esteem and indecision. Further, it is useful to develop an instrument that addresses the three aspects of self-ambivalence identified by Guidano and Liotti (1983), in order to be able to determine if these aspects form a unified construct. Finally, given that OCD individuals are purported to base their self-worth around moral criteria and social approval, it

appears useful to have a questionnaire that measures ambivalence towards these domains of self-worth.

8.1.5   Item-Pool for The Self-Ambivalence Measure

A pool of 52 items was considered for the questionnaire (see Appendix D). The items were drawn from clinical observations of patients with uncertain conceptions of a sense of self, and from theoretical postulations concerning self-concept OCD (Guidano, 1987; Guidano & Liotti, 1983). Further, some items were also based on comments from clinical psychologists familiar with Guidano and Liotti's theory (G. Bates, personal communication, April 20, 1998; M. Kyrios, personal communication, June 15, 1998; A. Piccardi, personal communication, May 21, 1999).

The item pool was shortened in order to strengthen the SAM's validity. First, items were removed from the pool that referred to defensive or self-esteem protective behaviours, rather than to an explicit experience of self-ambivalence. These items were removed in order to distinguish SAM from questionnaires that measure behavioural responses to self-ambivalence – such as perfectionism, dependency, hostility or obsessionality. Ten items were removed for this reason (e.g., "I am careful not to offend people").

Second, items were also removed if they appeared to relate specifically to domains of self-worth other than social-approval and morality. Eight items were removed as they related to beliefs about occupational or academic competency (e.g., "I doubt my competency in study or work"), while seven items were removed for capturing beliefs about body image (e.g., "I am insecure about the way I look physically"). However, items were retained if they appeared to capture more global or non-specific aspects of self-evaluation (e.g., "I have mixed feelings about my self-worth"). These items were retained in order to maintain SAM's relevance in measuring self-ambivalence across cohorts of varying diagnostic and clinical status.

Third, items were removed from the item pool if they lacked clarity (e.g., "Deep down I feel as if I <u>have</u> OR <u>don't have</u> what it takes to be popular"), or for measuring beliefs about other people rather than self (e.g., " Essentially people are either good or bad"). Six items were excluded for these reasons. Consequently, 21 items remained in the SAM item-pool for statistical analysis. Participants scored each item on a 5-point likert scale to indicate the extent to which they agreed with the item (0 = Not at all; 4 = Agree totally).

8.1.6 *This Study*

This study evaluated the psychometric properties of the 21 item pool. First, it investigated the factor structure of the questionnaire. It subjected the item pool to factor analysis, using a university student cohort. Individuals in early adulthood are said to be actively engaged in formulating a sense of identity, relationships and commitment to ethical principles (Erikson, 1968; Kilpatrick, 1974). Thus, it was assumed that a student sample would serve as an appropriate non-clinical analogue to an OCD sample who were themselves purportedly struggling with self-definition. In order to determine if this factor structure remained stable across age span and clinical status, confirmatory factor analyses were the employed using older adults, OCD sufferers and anxious controls.

Due to the lack of consensus about the independence between general and specific self views, exploratory factor analyses were conducted. The item pool for SAM was conceptualised as tapping into a global sense of self-worth, and two specific domains of self-worth – moral and social. However, it was unclear as to whether these a-priori divisions would remain after factor analysis. It was expected that the SAM would display between one and three factors, reflecting either a global construct of self-ambivalence, or domain specific categories of self-evaluation.

Second, the study examined the validity of SAM. Consistent with the trinitarian model of validity (Guion, 1980), the study tested content, criterion and construct validity associated with SAM. Content validity refers to how adequately a test samples

behaviours representative of the universe of behaviours that the test is designed to sample (Guion, 1980). This aspect of validity was evaluated by inspecting the range of items that significantly loaded on the factor or factors.

Criterion validity refers to a judgment about how adequately a test score can be used to infer an individual's most probable standing on some criterion (Guion, 1980). Criterion validity was investigated by examining whether individuals who scored high on SAM, also scored highly on measures of certain personality characteristics. These characteristics included narcissism, obsessional personality traits, borderline personality traits and dependency. As reviewed in chapters 5 and 6, these traits have been conceptualised as products of, or defences against an insecure sense of self-worth. In addition, given that research has shown those individuals who are ambivalent about their values, paradoxically overcompensate by emphasising those values (McGregor et al., 2001), it was expected that individuals who were ambivalent about their morality would also score highly on a measure of moral standards.

The developmental antecedents for self-ambivalence were also seen as appropriate for testing the criterion validity of SAM. As outlined in chapter 4, self-ambivalence has been theoretically linked to early ambivalent attachment with parental figures (Guidano, 1987; Guidano & Liotti, 1983). Thus, it was expected that individuals scoring high on SAM would report more ambivalence about their sense of being loved by parental figures during childhood. In order to measure ambivalent attachment, we used a new measure called the Early Developmental Influences Inventory (EDII)(Kyrios, 1998b). This questionnaire measures the person's memories of the type of parenting received during childhood, and the quality of their interaction with parents during these developmental phases. More specifically it measured the extent to which the person was certain of being loved and accepted by their parents. The EDII is distinct from other retrospective questionnaires on attachment (Arrindell et al., 1983; Crowell & Treboux, 1995) because it specifically attempts to addresses ambivalent attachment experiences within early parent-child dyads.

The final criterion for the SAM was age. We predicted that individuals in their early adulthood would have higher scores on SAM than an older cohort. As mentioned, young adults are hypothesised to be actively engaged in establishing a sense of identity, social networks and moral identity. These individuals are said to be in moratorium – that is, actively thinking about and questioning various occupational paths and values (Erikson, 1968; Marcia, 1966). Research has indicated that the prime time for experiencing moratorium is between 18 and 21 (Archer & Waterman, 1983; Waterman, 1982). Some research also has supported the claim that the transition from early to mid-adulthood involves the progressive strengthening of one's sense of identity (see Waterman, 1982). Thus, we expected that students in early adulthood would express more uncertainty, conflict and preoccupation with their personal sense of self-worth, in comparison to an older community sample of adults.

Construct validity refers to the extent to which the instrument measures what it purports to measure. Construct validity is assessed through the congruent and divergent validity of a scale. A scale demonstrates convergent validity if it is related to an alternative measure of the same or similar construct (Campbell & Fiske, 1959). Divergent validity is shown when a scale is poorly related to measures of dissimilar constructs. Convergent validity of SAM was examined by the patterns of correlations between the SAM and measures of self-uncertainty, splitting, preoccupation and stability. Strong relationships were expected between the SAM and self-clarity scale (SCC), Splitting Index (SP), Rumination Reflection Measure (RRM) and Rosenberg's Stability of Self Scale (RSS). Divergent validity of the SAM was assessed by examining the relationship between SAM and constructs such as self-esteem and decision making difficulties. The SAM was expected to correlate stronger with measures of self-uncertainty, splitting and preoccupation than with measures of self-esteem (Rosenberg, 1965) or decision-making difficulties (Frost & Gross, 1993).

8.2   Method

8.2.1   Participants

Non-clinical and clinical individuals participated in this study.

The non-clinical sample comprised non-clinical community controls (CC) and student controls (SC). Non-clinical individuals were included into the study if they were at least 18 years old. Participants were excluded if they disclosed a psychiatric history (as determined by a self-report psychiatric screening measure; Appendix E) or if their level of depression fell within clinical range on the Beck Depression Inventory-2 (Beck, Steer, & Brown). In total, six participants were excluded for scoring in the clinical range of BDI-II (Dozois, Dobson, & Ahnberg, 1998), seven participants were excluded on the basis of their psychiatric disclosures, and 3 participants were excluded because they were under the age of 18. Thus, the non-clinical sample comprised a total of 226 student controls and 43 community controls in the non-clinical cohort (see Table 8.1 for demographics).

The SC participants volunteered in exchange for course credit, after reading a brief notice about the study on the University of Melbourne Psychology Department's Research Notice Board. Most of the CC participants (87.8%) were invited to participate by colleagues and friends of the researcher. The researcher distributed questionnaires to his acquaintances who, in turn, invited their friends and family to participate. Questionnaires were anonymously mailed back to the researcher. The remaining 12.2% of CC participants responded to posters advertising the study. These posters (Appendix F) were placed at various community and university libraries, health centres and leisure venues (e.g., restaurants, cafés, etc).

The clinical samples comprised 73 individuals with OCD (OC) and 50 individuals with another anxiety disorder (AC). DSM-IV diagnoses were made using the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV) (Brown, Di Nardo, & Barlow, 1994). The OC and AC groups were recruited through the University Psychology Clinic, and through advertisements in local newspapers, flyers, electronic bulletins to the university community, announcements at local anxiety support groups, and posters (Appendix G). The majority of OCD participants (55%) were referrals to the University

Psychology Clinic, while 81.5% of ACs responded to newspaper, electronic or poster advertisements.

Consistent with other studies (e.g., Van Oppen, de Haan, Van Balkom, Spinhoven, & et al., 1995a), individuals were not included into the clinical groups of the study if they were less than 18 years old, failed to meet the threshold for an anxiety disorder as established by the ADIS-IV, or suffered from substance abuse, psychotic or neurological disorders. From a total of 104 participants who were considered for the clinical groups, 39 participants (37.5%) were not included in the groups because they met exclusion criteria. The demographics for clinical participants included in this study are shown in Table 8.1.

As shown in Table 8.2, participants in both clinical groups showed significant comorbidity with depressive disorders. Approximately 35% of the OC sample suffered major depressive disorder in addition to OCD, while nearly a quarter of the individuals in the AC sample also met the diagnosis of major depressive disorder in addition to an anxiety disorder. A further 16% of the AC sample suffered dysthymic disorder.

The AC group comprised individuals who met the DSM-IV diagnostic criteria for an anxiety disorder other than OCD. As shown in Table 8.2, most of these participants were diagnosed with panic disorder (28%), social phobia (28%), GAD (18%) or PTSD (12%). Compared to a recent multi-site study of cognitions in OCD and AC groups (Obsessive-Compulsive Cognitions Working Group, 2003), the AC sample in this thesis had a higher proportion of individuals with social phobia (28% vs. 13%), but a lower proportion of participants with panic disorder (28% vs. 72%).

As shown in Table 8.1, the OC and AC groups did not differ in age, but were older than the SC group. The CC group was significantly older and more educated than the other groups. The OCs had significantly less education than the AC and SC samples. No differences were evident for gender, country of birth, or languages spoken. The majority of participants in all groups were female, Australian born and spoke only English at

home. Further, there was no difference in the proportion of ACs and OCs on antidepressant or anti-anxiolytic medication.

8.2.2   Procedure

The SCs attended a testing session where they were asked to complete questionnaires relating to various aspects of psychopathology and self-concept. Each participant was given information about the study (Appendix H), and was required to consent to the study in order to participate. Participants were reminded that their responses on questionnaires would be anonymous and treated as confidential. The participants then completed questionnaires silently and independently for up to one hour in classroom conditions. Each participant was then given further background information about the study (Appendix I).

For the CCs, consent to participate was assumed if the participant completed and returned the questionnaire. Questionnaires were mailed out to these participants or were given directly to them by acquaintances of the researcher. An information sheet was sent with these questionnaires explaining the broad purpose of the study (Appendix J). Participants were encouraged not to state their name on the questionnaires in order to ensure anonymity.

The AC and OC participants were provided with information about the study by phone or mail. The inclusion and exclusion criteria for participation were described. Suitable participants who were still interested in participating in the study were invited to attend a 1-hour one-on-one, face-to-face interview. At the interview the participants were (a) given written information about the study (Appendix K), (b) asked to sign the consent form and (c) invited to complete the 52-item version of the SAM (Appendix D). Then the interview was conducted, using the ADIS-IV. Participants were given a battery of questionnaires, which they were asked to complete and return within a week. The procedures in the interview are described in more detail in Appendix L.

Forty-one participants in the OC group (56%) were accepted into the treatment phase of the research, and therefore completed questionnaires before, during and after receiving cognitive behavioural treatment. The demographics of this sample and the procedures relating to the treatment are fully described in chapter 10. However, for the purposes of this chapter, it is relevant to note that these participants completed the SAM before and after an average interval of approximately 10 weeks, whilst waiting for treatment. The data from this sample were used to investigate the test retest reliability of SAM.

8.2.3   Measures

The interview schedule and the questionnaires relevant to this study are outlined below.

(1) *The Anxiety Disorders Interview Schedule for DSM-IV* (ADIS-IV) (Brown et al., 1994) is a 90-minute semi-structured interview that specifically covers the DSM-IV anxiety disorders and related disorders (e.g., mood disorders). Previous editions of ADIS have demonstrated good reliability for the majority of disorders covered (Di Nardo, Moras, Barlow, Rapee, & Brown, 1993). Similarly, good to excellent inter-rater reliability has been obtained for the majority of DSM-IV categories, using ADIS-IV (Brown, Di Nardo, Lehman, & Campbell, 2001).

(2) *The Self-Concept Clarity Scale* (SCC) (Campbell et al., 1996) is a 12-item questionnaire measuring the extent to which self-beliefs are clearly and confidently defined, internally consistent and stable. Subjects are required to indicate the extent to which they agree with these items, using a 5-point scale (0 = strongly disagree; 4 = strongly agree). The SCC demonstrates adequate reliability (internal consistency alpha = .86; temporal reliability across a 4-month interval r = .79), and construct validity (e.g., low clarity was associated with chronic self-analysis, and relevant personality characteristics such as neuroticism) (Campbell et al., 1996). Examples of items include "Even if I wanted to, I don't think I could tell someone what I'm really like" and "In general, I have a clear sense of who I am and what I am" (see Appendix M).

(3) *The Splitting Index* (SI) (Gould et al., 1996) is a 24-item self-report measure of Kernberg's concept of splitting, i.e., the tendency to oscillate between seeing oneself or others as all good or all bad (Kernberg, 1975, 1976, 1986). The SI comprises three subscales measuring the splitting of self (eight items), others (eight items) and family (eight items). The SI is associated with good temporal stability (r = .86, over four weeks), internal consistency (alpha = .92) and reliable construct validity (Gould et al., 1996). Because the focus of this study was on perceptions of self, only the self-scale was employed (alpha = .88, test retest r = .83). Participants rated the extent to which they agreed with each of the eight statements in this subscale (1 = strongly disagree; 5 = strongly agree). Examples of items include "The different parts of my personality are difficult to put together" and "I feel different about myself when I am with different people" (see Appendix N).

(4) *The Rumination-Reflection Questionnaire* (RRQ) (Trapnell & Campbell, 1999) is a 24-item self-report questionnaire that was designed to explicitly distinguish anxious from inquisitive self-focus. It comprises two subscales (12 items in each scale) pertaining respectively to tendencies for reflection and for rumination about the self. Reflection represents inquisitive self-focus (e.g., "I love exploring my inner self"). Rumination reflects an anxious preoccupation with the self (e.g., "Often I'm playing back in my mind how I acted in a past situation"). Items are rated on a 5-point scale (1 = strongly disagree to 5 = strongly agree). Reflection and rumination were found to constitute independent tendencies (r = .22). Both scales were internally consistent (coefficient alphas of .91 and .90 respectively) and correlated as expected with criterion measures of self-consciousness and absorption scales (Trapnell & Campbell, 1999). See Appendix O for a copy of the questionnaire.

(5) *Rosenberg Stability of Self-Scale - Amended New York version* (RSS) (Rosenberg, 1965) is a five-item self-report measure of self-esteem stability. Subjects endorse each item on a 4-point scale (0 = not at all, to 3 = a lot). The scale is reported to be reliable (Rosenberg, 1986) and to have one factor (Franzoi & Reddish, 1980). Examples of items include "My opinion of myself changes a good deal" and "I have noticed that my ideas about myself seem to change very quickly" (Appendix P).

(6) *The Rosenberg Self-Esteem Questionnaire* (RSE) (Rosenberg, 1965) is one of the most widely used measures of global self-esteem, comprising 10 statements regarding self-worth. In the RSE, self-esteem refers to feelings of self-acceptance, self-respect and self-worth. Respondents rate each item on a modified 9-point scale (1 = "Definitely disagree"; 9 = "Definitely agree"). Research examining the psychometric properties of the RSE has indicated acceptable to high reliability with Chronbach Alphas ranging from 0.72 to 0.88, and test-retest correlations ranging from 0.53 (1 year) to 0.82 (1 week) (see Gray-Little, Williams, & Hancock, 1997). Construct validity of the RSE has been demonstrated by its convergence with measures of depression, anxiety, self-discrepancy and other measures of self-esteem (Rosenberg, 1979). There is compelling evidence that the scale is unifactorial (Greenberger, Chen, Dmitrieva, & Farruggia, 2003; Wang, Siegal, Falck, & Carlson, 2001). Examples of items include "I feel I am a person of worth" and "On the whole I am satisfied with myself" (Appendix Q).

(7) *The Early Developmental Influences Inventory (EDII)* (Kyrios, 1998b) is a newly developed 72 item self-report questionnaire that measures recollections of early developmental influences (e.g., parenting), subsequent attachment styles and self-perceptions about identity. Preliminary analysis has suggested that the EDII measures 4 parenting-styles (secure, ambivalent, chaotic, and rejecting), 4 attachment styles (secure, ambivalent, dependent, avoidant) and 2 early representations of self (insecure, ambivalent) (Bhar, Kyrios, Hordern, & Frost, 2001). Items are rated on a 5-point scale (1 = Not at all accurate; 5 = Completely accurate). Preliminary investigations have indicated adequate internal consistency (alphas range from .64 to .94) and convergent validity for this measure (Bhar et al., 2001). In this study, only two subscales of the EDDI were used: (a) ambivalent parenting, comprising seven items that measure demanding but overindulgent parenting (e.g., "My early childhood featured too much discipline", "My early childhood featured immediately having whatever I wanted"), and (b) ambivalent attachment, which comprised five items measuring interpersonal insecurity (5 items, e.g., "Other people have generally always confused me"). See Appendix R for a copy of these subscales.

(9) *The Frost Indecision Scale* (FIS) (Frost & Gross, 1993) is a 15-item scale designed to measure fears and difficulties associated with making decisions. Nine items are worded negatively (e.g., "I become anxious when making a decision") and six positively (e.g., I find it easy to make decisions"). This division is purported to respectively reflect fears about decision making and positive attitudes towards decision making. In this study, the full scale was used as in order to measure overall decision making attitudes. The items are rated on a 5 point scale (1 = strongly disagree; 5 = strongly agree). The FIS demonstrated adequate reliability and validity in a study of undergraduate students (Frost & Shows, 1993). The scale displayed convergent validity with respect to measures of compulsive checking, doubting, obsessionality, hoarding, procrastination, and aspects of perfectionism such as concern over mistakes (Frost & Shows, 1993). The scale also displayed adequate criterion validity with respect to latency for making decisions. Individuals with high scores on the FIS took significantly longer to make a decision than individuals with low scores (Frost & Shows, 1993). The alpha coefficient for the scale is 0.87 for undergraduates (Frost & Gross, 1993) and .90 for clinical hoarders (Steketee, Frost, & Kyrios, 2003). See Appendix S for a copy of this scale.

(10) *The Personality Diagnostic Questionnaire – 4ᵗʰ Revision* (PDQ-IV)(Hyler, 1994) is an 85 item self-report questionnaire that assesses DSM-IV personality disorders. Each item is rated as true or false and corresponds directly to a single DSM-IV criterion for Axis II disorders. The PDQ-IV also contains two validity scales to assess random responding and a defensive test-taking approach. Scoring the PDQ-IV involves counting the number of True responses in order to determine if the threshold for a particular personality disorder has been reached. In this thesis, only three subscales from the PDQ-IV were employed; (a) the OCPD sub-scale (e.g., "I waste time trying to get things too perfect"; 8 items), (b) the Narcissistic Personality Disorder subscale (e.g., "I have accomplished far more than others give me credit for"; 9 items) and (c) BPD subscale (e.g., "I often wonder who I really am"; 9 items). Earlier versions of the PDQ-IV have been found to have excellent sensitivity but low specificity for detecting axis-II disorders (Fossati et al., 1998; Hyler, Skodol, Oldham, Kellman, & Doidge, 1992; Hyler, Skodol, Kellman, Oldham, & Rosnick, 1990). The PDQ-IV is therefore well

regarded as an efficient tool for screening personality disorders rather than as a substitute for structured interview assessments (Rosen & Tallis, 1995). See Appendix T for a copy of the PDQ-IV scales relevant to this thesis.

(11) *The Personal Style Inventory (PSI)* (Robins & Luten, 1991) is a 48-item inventory comprising two subscales measuring the level of Sociotropy (24 items) and Autonomy (24 items) respectively on a six point scale (1 = strongly disagree to 6 = strongly agree). Only the Sociotropy scale was used in this study to measure needs for approval and concerns over one's social image. Satisfactory psychometrics have been found for the Sociotropy scale, including adequate internal consistency (alpha = .88) (Bhar & Kyrios, 1999), predictive validity with respect to sub-clinical depression (Robins & Luten, 1991) and convergent validity particularly with respect to socially prescribed perfectionism (Bhar & Kyrios, 1999). Examples of items include "I am very sensitive to criticism by others" and I try to please other people too much" (see Appendix U).

(12) *Beck Depression Inventory - II* (BDI-II) (Beck et al., 1996) is a 21-item self-report instrument for measuring the severity of depression in adults and adolescents aged 13 years and older. The BDI-II was developed as an indicator of the presence and degree of depressive symptoms consistent with DSM-IV. Each item is rated on a 4-point scale ranging from 0 to 3. Total scores range from 0 to 63, with higher scores reflecting more severe levels of depression: l 0-13 (minimal), 14-19 (mild), 20-28 (moderate), and 29-63 (extreme). The BDI-II has been found to have high internal consistency (α = .92 in outpatients, α = .93 in undergraduate university students), good test-retest stability over a one-week period (r = .93, p < .001) and adequate construct and criterion validity (Beck et al., 1996). Patients with mood disorders obtained higher BDI-II scores (*M* = 26.57, *SD* = 12.15) on average than patients with anxiety, adjustment or other disorders (*M* = 16.50 to 19.38; *SD* = 11.46 to 12.33) (Beck et al., 1996). The correlation between the BDI-II and the earlier version BDI was .84 (p < . 001) in outpatients (Beck et al., 1996) and 0.93 (p < .01) in undergraduate students (Dozois et al., 1998). See Appendix V for the company address from where a copy of the BDI-II can be obtained.

(13) *The Guilt Inventory* (Kugler & Jones, 1992) is a 45 item self report inventory that assesses trait guilt (i.e., a continuing sense of guilt beyond immediate circumstances), state guilt (i.e., present guilty feelings based on current or recent transgressions) and moral standards. Moral standards refer to one's subscription of moral principles without reference either to specific behaviours (e.g., "I believe in a strict interpretation of right and wrong", "What is right and wrong depends on the situation"). For the purposes of this study, only the Moral standards subscale (MORAL) was used. This subscale has satisfactory internal consistency and construct validity (Jones & Kugler, 1993; Kugler & Jones, 1992; Wade, Kyrios, & Jackson, 1998). See Appendix W for a copy of this subscale.

8.3   Results

8.3.1   Principal Components Analysis

Given that different factor structures for the 21 SAM items could emerge for different age and clinical samples (Tabachnick & Fidell, 1996), the various samples were not initially combined for the analyses. Box's M's test of equality of covariance matrices[3] was conducted to explore homogeneity of covariance matrices of the SAM items across the four samples. The test indicated significant heterogeneity in the covariance matrices across the samples [F (693, 54650) = 1.681, p = .000). Therefore, *exploratory* factor analyses were initially conducted on the student group (SC), in view of the sample's large sample size.

8.3.1.1 Factorability of correlation matrix for SC sample.

Factorability of the correlation matrix comprising 21 items was found to be adequate according to several indicators. First, the correlation matrix for the 21 items showed that

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[3] Box's M is a test for the equality of the group covariance matrices. It tests the null hypothesis that the observed covariance matrices of 21 items in the SAM are equal across groups For sufficiently large samples, a non-significant p value means there is insufficient evidence that the matrices differ. The test is sensitive to departures from multivariate normality.

45.26% of the coefficients were greater than 0.3 in absolute value. All items had large correlations (greater than .30) with a least one other item in the set. Second, Bartlett's test of sphericity was conducted to test whether the correlation matrix was an identity matrix, i.e., where diagonal terms were 1 and off-diagonal terms were 0. The correlations were not found to constitute an identity matrix (χ^2 (210) = 1745.46, p = .00]. Third, the Kaiser-Meyer-Olkin measure of sampling adequacy was .89, which indicated a "meritorious" degree of non-unique covariance amongst the set of items (Kaiser, 1974). Given the high level of covariance between all items, no corrections to normality, linearity or outliers were made. Threats related to multicollinearity and singularity were checked and excluded. All 21 items were retained for analysis.

8.3.1.2 Extraction and rotation procedures.

The items were subjected to principal component analyses (PCA). Item loadings greater than 0.40 were regarded as salient loadings. Five components emerged with Eigen values over 1 (7.46, 1.79, 1.43, 1.14, 1.10), but the scree-plot clearly indicated the presence of one component. One component was therefore extracted. This component explained 35.54% of the total variance, and reproduced the correlation matrix with 59% non-redundant residuals with an absolute value of more than .05. As shown in *Table 8.3*, 19 of the 21 items loaded significantly on this component. The two items that failed to load significantly on to this component were items 34 ("I am secure in my sense of self-worth") and 10 ("Essentially people like you or they don't; there is no middle ground").

8.3.2 Factor Structure Across Cohorts: Confirmatory Factor Analysis

In order to determine if the initial factor analytic results generalised to all groups, comparisons were conducted between the SC group and the three other samples (OC, AC and CC) on factor structure and the pattern of loadings within factors. Three questions were considered when comparing the factor structure across groups. First, did the other groups generate the same number of factors as the SC group? Second, did

almost the same variables load highly on factors in the four groups? Third, did items show similar loading patterns on these factors in the four groups?

Principal Components Analyses were conducted on the data sets from the OC, AC and CC samples respectively. Given the small samples sizes, these analyses were conducted to simply provide an approximate indication of the factor solutions for each sample. Further, scree plots instead of eigen values were used to estimate the number of factors to be extracted in each solution.

The scree plots for the OC and AC samples suggested a single factor structure explaining 40.50% and 42.73% of total variance, respectively. The scree plot for the CC sample suggested a 4-factor solution, but two of these components contained less than 4 salient simple loadings, and two components (with 5 salient loadings each), were difficult to interpret (Table 8.4). In view of the small CC sample size (n = 43 due to 7 with missing data), this solution was regarded as unstable. When a single factor solution was extracted, it explained 31.68% of the total variance. A chi-square test of fit was conducted to determine if the single solution adequately fit the data set within this CC sample. The data set was subjected to a Maximum Likelihood extraction, and constrained to a single factor solution. The observed chi-square (302.826) was less than two times the degrees of freedom (189)[4]. This result was taken to support the adequacy of fit between the one factor solution and the CC data set (Tabachnick & Fidell, 1996). In summary, the data sets across the four samples were adequately explained by a single factor solution (Table 8.5).

In order to test whether almost the same variables loaded highly on the single factor across the four cohorts, Cattell's salient similarity index, s was calculated between the OC, AC and CC cohorts in relation to the SC group (Cattell, Balcar, Horn, & Nesselroade, 1969)[5]. These analyses found that the three cohorts had similar loading

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[4] As recommended by Tabachnick and Fidell (1996), rather than using significance value of χ^2 to establish fit, the ratio of χ^2:degrees of freedom was calculated. They propose that "one very rough rule of thumb, is that a good fitting model may be indicated when the ratio of the chi sq to the degrees of freedom is less than 2" (p. 748).

[5] This is a factor matching procedure that statistically compares solutions.

patterns when compared with the SC group (s = 1.00, p < .01; s = 0.89, p < .01; s = 0.92, p < .01; See Appendix X for the analysis).

Finally, Pearson Product-Moment correlation coefficients were used to further compare the pattern of loading magnitudes across sample groups (Tabachnick & Fidell, 1989). This analysis tested the relationship of loading magnitudes between the factor in the SC group and other groups. It examined whether items that loaded highly on the factor in the SC cohort also loaded highly on the factor for the other cohorts. The correlation coefficients were significant at p < 0.01 for all comparisons with the SC sample (OC: r = .78, p < .01; AC: r = .57, p < . 01; CC: r = .61). This result indicated a similar pattern of factor loadings for items across the samples.

8.3.2.1 SAM factor scale score.

In summary, the 19-item one-factor solution that emerged in the SC sample was found to be stable across the OC, AC and CC groups. A single SAM factor scale score was therefore computed by adding the responses of these 19 items. This scale score allowed for a score range from 0 to 76, with higher scores indicating higher levels of self-ambivalence. The 19-item SAM scale is presented in Appendix Y.

8.3.3   Reliability

The 19-item SAM was associated with high internal consistency in all sample groups (Table 8.6). Tests of significance were conducted to determine whether the degree of internal consistency varied across samples (Appendix Z). These tests found that the SAM was associated with an equal level of internal consistency across the groups. The inter-item correlation magnitudes averaged between 0.29 and 0.39 (Table 8.6). The item-total correlations averaged between 0.51 and 0.60 across the samples. Further, for all samples, internal consistency did not significantly improve with item deletions; hence all 19 items were retained.

Test-retest reliability was assessed by examining the change in SAM for 41 OCD participants on a waiting list for cognitive behavioural treatment. Over a mean 10.08 week interval (SD = 2.64), correlational analysis revealed a significantly high level of temporal stability in SAM (r = .77, p = .000).

8.3.4   Validity

8.3.4.1 Content validity.

SAM items were examined for their representation of domains of self-ambivalence. As desired, ambivalence about personal morality and lovability were well represented (7 and 5 items respectively). The remaining seven items appeared to assess the global self-concept. This composition is consistent with the view that the SAM is a measure of self-ambivalence with respect to specific and global aspects of self-concept.

Moreover, most items appeared to relate specifically to one's uncertainty about, and preoccupation with self-evaluations (7 and 8 items respectively), rather than about the sense of dichotomous competing self-images (4 items). Thus, while all three structural aspects of self-ambivalence were represented by SAM, its content may be weighed towards the former two structural aspects about self-definition, rather than the latter.

8.3.4.2 Criterion validity.

Criterion related validity of SAM was tested in relation to (a) personality features, (b) early developmental influences and (c) age, all of which have been hypothesised to relate to self-ambivalence. First, the relationship between the SAM and measures of personality features were examined. In order to protect against restriction in score ranges, the analyses were conducted on the four sample cohorts together rather than separately. As shown in Table 8.7, the SAM correlated with the OCPD, Narcissism and

Borderline scales of the PDQ-IV, in the moderate to large range[6]. The SAM exhibited a large correlation with dependency subscale of the PSI, and correlated to a lesser extent with moral standards subscale of GI.

Second, the SAM correlated significantly with the two ambivalent subscale of the EDDI. The SAM exhibited a large correlation with ambivalent attachment and a moderate correlation with ambivalent parenting. Finally, in order to test for whether the SAM distinguished between age groups, the student cohort was compared with the community cohort. As predicted, students (mean = 30.14, SD = 13.63) scored significantly higher than the community controls (mean = 14.28, SD = 9.68) on the SAM [t (247) = 9.04, p < .001].

8.3.4.3 Construct validity: Convergent and discriminant validity.

To test convergent and discriminant validity, zero-order correlations were conducted between the SAM and measures of self-uncertainty (SCC), splitting (SI), self-instability (RSS), self-preoccupation (reflection and rumination scales of RRQ), self-esteem (RSE), and decision making difficulties (FIS). Except for computations involving SI, RSS and RRQ where data was available only for the SC group, all participants across the four cohorts were combined for these analyses.

As shown in Table 8.8, scores on the SAM correlated highly with scores on measures of self-uncertainty, instability, fragmentation and anxious preoccupation. These results support the validity of the SAM in measuring these three aspects purported to be central to the notion of ambivalence. The fact that the SAM did not correlate strongly with self-reflection, suggests that the SAM relates better to anxious preoccupation about the self rather than inquisitive reflections about self.

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[6] Descriptions about correlations being large, moderate or small are based on Cohen's (1988) categories of correlation coefficient magnitudes. Magnitudes greater than 0.5 are "large", between 0.5 and 0.3, "moderate", and between 0.3 and 0.1, "small".

The SAM also correlated to a large extent with measures of low self-worth and indecision. Further analyses were performed to examine if the SAM was psychometrically closer to the notion of self-ambivalence, rather than self-esteem or indecision. The correlation between the SAM and a composite of 4 measures of fragile self-concept (SCC, SI, RSS, RUM) was compared to the correlations between SAM, RSE and FIS. William's (1969) t-tests for non-independent correlation coefficients were conducted to test for significant differences between the correlations[7]. Table 8.9 presents these correlations. In order to standardise the samples supporting the various correlation coefficients, N was constrained to the SC sample only (N = 117 because of list-wise treatment of missing values). Compared to measures of self-fragility, SAM correlated significantly lower with RSE [t (114) = 4.41, p < .001] and FIS [t (114) = 5.21, p < .001].

The SAM was developed to constitute a measure of self-ambivalence that was psychometrically independent from self-esteem and decision making difficulties. Therefore, it became important to explore whether the association of the SAM to FIS and RSE emerged because of the phrasing of the items in the SAM, rather than to a substantive association between the constructs. As presented in Table 8.10, only 2 items from the SAM correlated more than .6 with RSE, while none correlated as highly with FIS.

8.3.5   Summary of Results

The psychometric properties of the SAM were explored. The SAM was found to be associated with a single factor structure that was stable across clinical and non-clinical cohorts. In each cohort, this factor was internally consistent, and in the OCD cohort, temporal stability was demonstrated. The content, criterion and construct validity of the SAM were demonstrated. The SAM correlated highly with measures of self-uncertainty,

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[7] $t (N - 3) = \sqrt{[(N-1)(1+r_{23})/2(N-1/N-3)R+(r_{12}+r_{13})2-(1-r_{23})^3]}$ where $R = [(1-r^2_{12}-r^2_{13}-r^2_{23})+(2r_{12}r_{13}r_{23})]$

self-dichotomy and self-rumination. In contrast, the SAM was less strongly related to self-esteem and decision making difficulties.

8.4   Discussion

The SAM was developed to measure Guidano and Liotti's (1983) construct of self-ambivalence. Self-ambivalence was operationalised as the extent to which the self-evaluations were explicitly felt to be unresolved, perceived in terms of dichotomies and the focus of excessive personal attention and scrutiny. In addition, the SAM was constructed in order to measure self-ambivalence about personal morality and lovability. This study explored the factor structure and psychometric properties of SAM.

8.4.1   Factor Structure of SAM

The SAM is best described in terms of a single factor with 19 items, measuring the extent to which beliefs about self-worth are uncertain, conflicted and a source of anxious introspection. This factor was found to be stable across diagnostic and age groups and to be associated with high internal and temporal reliability.

In this study, perceptions of about one's morality and lovability did not emerge as separate factors. One conclusion from this finding is that the items in the SAM did not adequately measure self-appraisals in either domain. However, the content of the SAM did appear to relate to conflicts about moral and social aspects of self-concept respectively. A more likely reason for the lack of separate factors is that moral and social domains of self-worth are intractably linked with each other and one's global sense of self-worth. Indeed, one interpretation of these results is that individuals may perceive personal morality as an important prerequisite for being accepted and loved by others (Aquino & Reed, 2002), which in turn is central to an overall certainty about self-worth.

This interpretation is consistent with Guidano and Liotti's theory that global self-worth is influenced by the extent to which one adheres to moral principles and feels accepted by others. This interpretation is also consistent with hierarchical models of the self, that portray the self-concept as consisting of global evaluations about self which subsume domain-specific self-views (Marsh, 1986; Marsh & Hattie, 1996; Shavelson et al., 1976). Even though, theoretically, it is accepted that individuals can regard themselves differently across their different roles, many measures of self-esteem have not been able to statistically separate out the differences between views across these domains. This is particularly true for instruments that measure abstract qualities about self (e.g., one's sense of morality) rather than specific abilities (e.g., mathematical abilities) (Coopersmith, 1986; Hattie, 1992).

8.4.2   Validity of the SAM

Criterion validity of the SAM was demonstrated through significant correlations with a range of personality and developmental constructs. First, high scores on the SAM were associated with high scores on measures of obsessional personality traits, narcissism, borderline personality traits and dependency. Numerous theorists have portrayed such traits as defences or reactions to insecurities and conflicts about self-esteem (Morf & Rhodewalt, 2001; Wilkinson-Ryan & Westen, 2000). The fact that the SAM correlates with measures of these traits constitutes good evidence that the SAM measures ambivalent representations of self.

Second, SAM correlated strongly with developmental antecedents of an ambivalent sense of self, as outlined by Guidano & Liotti (1983). As reviewed in chapter 4, Guidano and Liotti (1983) proposed that self-ambivalence develops because of ambivalent relationship with caregivers, leaving the child conflicted about whether they are worthwhile and lovabile. More specifically, Guidano and Liotti implicate double bind parenting in predisposing the child towards self-ambivalence. Double bind parenting is said to be characterised by demands for maturity and morality in the context of inconsistent displays of indulgence, affection and attention towards the child. In this study, the EDDI was used to measure the extent to which one recollected one's parents

as inconsistent in their display of demands and indulgence, and the extent to which one felt accepted by others. Evidence was found for the association between self-ambivalence, double bind parenting and ambivalent attachments.

The criterion validity of the SAM was further supported by the finding that there was a significant, albeit modest, correlation between the SAM and the measure of moral standards. This result is consistent with research showing that when a person is ambivalent about certain values , he or she may compensate against such uncertainty by displaying a hardened conviction for this value. (McGregor et al., 2001). Accordingly, individuals who were ambivalent about personal morality endorsed having high moral standards. The weak but significant relationship between SAM and Moral Standards tentatively supports SAM as measuring some moral ambivalence.

Finally, as predicted, the criterion validity of SAM was supported by the finding that students scored significantly higher on SAM than older community adults. This result is consistent with developmental models that portray identity as consolidating with age (Erikson, 1968; Marcia, 1966). For example, according to developmental research, individuals between 18 and 21 are in a moratorium – that is, actively thinking about and questioning various occupational paths and values (Waterman, 1982, 1985). In contrast, older adults have been found to more established in terms of their self-conceptions, vocation, political views and social relationships (Waterman, 1982). Consistent with such research, we found that students who were on average 19.6 years old were more ambivalent about their self-worth, than the community cohort, which on average, was 43.78 years of age.

In support of its convergent validity, the SAM related highly to measures of self-clarity, splitting, self-esteem instability and anxious preoccupations about personal features. Consistent with the definition of self-ambivalence as a combination of self uncertainty, dichotomous representations about self and anxious preoccupation about the self-concept, the SAM related to measures of each of these constructs.

The SAM also correlated with measures of self-esteem (RSE) and decision making difficulties (FIS). One interpretation of this result is that the SAM lacks divergent validity. Alternatively, it can be argued that self-ambivalence involves to some extent low self-worth and poor decision making abilities. Past research has shown that individuals with poorly formed representations of self also have low self-esteem (Baumgardner, 1990; Campbell, 1990; Greenwald et al., 1988). Some researchers have suggested that individuals with a low sense of self-worth have more pliable notions of self (Campbell et al., 1996). Conversely, others are argued that unstable conceptions about self-worth form vulnerability for low self-esteem (Pelham & Swann, 1989). Likewise, broader deficits in decision making impair one's ability to decide upon self-worth.

In support of the SAM's divergent validity, further analyses found that the SAM related significantly better to measures of self clarity, self-splitting, self-rumination and self instability than to either self-esteem or indecision. This finding provides support for aligning the SAM as a measure of self-structure, rather than self-esteem or decision making impairments. In addition, the relationship between the SAM and FIS and RSE was not found to be well explained by cross-contamination of items. Most of the individual items in the SAM related in the low or moderate range to FIS and RSE, further supporting the psychometric independence of the SAM from RSE and FIS.

8.4.3   Conclusions

This study represents the first step towards a validated measure of self-ambivalence. It was successful in developing a questionnaire that integrated various aspects of self-ambivalence into a singular construct. In this respect, the SAM is unique compared to other measures of self-uncertainty and instability. The study also confirmed the factor structure of the SAM across clinical and non-clinical samples, thus facilitating its use across a range of sample groups.

The SAM however did not separately measure the moral and social aspects of self-perceptions. Although both of these domains are represented in the SAM, the

questionnaire is best conceptualised as a measure of general self-ambivalence than moral ambivalence or social ambivalence specifically. Further research will be required in order to develop measures of these constructs. The notion that morality and social approval belong in a hierarchical or nested relationship requires further theoretical and statistical study.

Table 8.1

Demographics Across Four Cohorts

	1. SC	2. CC	3. OC	4. AC	Comparisons*
Age	19.55 (3.27)	43.78 (13.92)	36.16 (11.24)	36.45 (11.42)	2>3,4>1
Education (in years)	14.33 (1.48)	16.44 (3.63)	12.58 (3.49)	14.79 (3.78)	2>1,4>3
Live in Australia (years)	16.93 (4.23)	36.54 (15.76)	34.10 (12.78)	32.09 (13.84)	2,3,4>1
% Female	70.6	70.7	62.9	78.0	$\chi^2 (3) = 3.28$, ns
% Speak English only at home	82.2	95.2	90.0	89.7	$\chi^2 (3) = 5.74$, ns
% Australian Born	80.5	69.0	86.4	68.3	$\chi^2 (3) = 7.39$, ns
% Psychotropic Medication	Not assessed	Not relevant	48.6	64.7	$\chi^2 (1) = 1.49$, ns

Note. Figures in brackets are standard deviations. SC = Student Controls; CC = Community Controls; OC = OCD group; AC = Anxious Controls.

*Comparisons refer to Student-Neuman-Keuls (SNK) post hoc comparisons ($p < .05$) (age, education, live in Australia), and to chi square indices ($p < .05$) (Gender, English speakers, Australian born, medication). In order to protect against type 2 errors, significance levels were not reduced. $F (3, 375) = 169.603$, $p = .00$ for Age; $F (3, 248) = 15.06$, $p = .000$ for Education; $F (3, 256) = 56.02$, $p = .000$ for Live in Australia.

Table 8.2

Anxiety and Depressive Comorbidity associated with OC and AC Samples

	OC sample (n = 73)		AC sample (n = 50)	
	n	%[a]	n	%[a]
PTSD	1	1.47	6	12.00
Panic disorder	0	0.00	14	28.00
Specific Phobia	1	1.47	4	8.00
Social Phobia	3	4.10	14	28.00
GAD	0	0.00	9	18.00
Major depression	25	34.20	12	24.00
Dysthymic Disorder	3	4.41	8	16.00
Anxiety Disorder NOS	0	0.00	3	6.00

Note. OC = OCD group; AC = Anxious Controls.

[a] Percentages add up to more than 100% because of multiple diagnoses per participant.

Table 8.3

Factor Loadings of 21 SAM Items in The SC Sample

Items	Component
31. I have mixed feelings about my self-worth	.797
45. I am constantly worried about whether I am a good or bad person	.712
41. I am constantly concerned about whether I am a "decent' human being	.701
9 I feel torn between different parts of my personality	.695
18. I am constantly aware of how others perceive me	.682
26. I question the extent to which others want to be close to me	.678
17. I think about my worth as a person	.662
39. I tend to move from one extreme to the other in how I think about myself	.634
2. I doubt whether others really like me	.632
20. I feel that I am full of contradictions	.624
37. I question whether I am morally a good or bad person	.604
52. I constantly worry about whether I will make anything of my life	.579
29. I tend to think of myself in terms of categories such as "good" or "bad"	.566
40. I think about how I can improve myself	.563
15. I fear I am capable of doing something terrible	.532
35. I question whether I am a moral person	.528
47. When I am with others, I think about whether I look my best	.494
38. If I inadvertently allow harm to come to others, this proves I am untrustworthy	.463
5. I am mindful about how I come across to others	.431
34. I am secure in my sense of self-worth	.368
10 Essentially people like you or they don't; there is no middle ground	.333

Note. SC = Student Controls.

Table 8.4

Four Factor Solution for The CC Sample

Items	1	2	3	4
26. I question the extent to which others want to be close to me	0.850			
39. I tend to move from one extreme to the other in how I think about myself	0.758			
2. I doubt whether others really like me	0.753			
52. I constantly worry about whether I will make anything of my life	0.611		-0.254	
17. I think about my worth as a person	0.601	0.468		
5. I am mindful about how I come across to others	0.525			0.431
40. I think about how I can improve myself	0.472	0.344		
41. I am constantly concerned about whether I am a "decent' human being		0.801		0.250
18. I am constantly aware of how others perceive me	0.326	0.748		
31. I have mixed feelings about my self-worth	0.542	0.652		
45. I am constantly worried about whether I am a good or bad person		0.618	0.336	
20. I feel that I am full of contradictions	0.394	0.566	0.320	
9. I feel torn between different parts of my personality	0.384	0.501		0.344
37. I question whether I am morally a good or bad person			0.863	
35. I question whether I am a moral person			0.859	
15. I fear I am capable of doing something terrible			0.833	0.282
29. I tend to think of myself in terms of categories such as "good" or "bad"		0.354		0.813
10. Essentially people like you or they don't; there is no middle ground	0.284			0.727
38. If I inadvertently allow harm to come to others, this proves I am untrustworthy		0.479		0.623
34. I am secure in my sense of self-worth		0.320		-0.553
47. When I am with others, I think about whether I look my best				0.465

Note. CC = Community Controls.

Table 8.5

Factor Loadings Based on OC, AC, and CC Samples

Items	Samples		
	OC	AC	CC
31. I have mixed feelings about my self-worth	.768	.808	.723
45. I am constantly worried about whether I am a good or bad person	.732	.816	.501
41. I am constantly concerned about whether I am a "decent" human being	.723	.811	.640
9 I feel torn between different parts of my personality	.605	.687	.745
18. I am constantly aware of how others perceive me	.743	.681	.711
26. I question the extent to which others want to be close to me	.725	.808	.681
17. I think about my worth as a person	.704	.679	.785
39. I tend to move from one extreme to the other in how I think about myself	.746	.600	.469
2 I doubt whether others really like me	.563	.761	.452
20. I feel that I am full of contradictions	.729	.658	.641
37. I question whether I am morally a good or bad person	.768	.613	.465
52. I constantly worry about whether I will make anything of my life	.663	.721	.462
29. I tend to think of myself in terms of categories such as "good" or "bad"	.568	.811	.634
40. I think about how I can improve myself	.417	.486	.596
15. I fear I am capable of doing something terrible	.545	.291	.477
35. I question whether I am a moral person	.712	.300	
47. When I am with others, I think about whether I look my best	.572	.591	.466
38. If I inadvertently allow harm to come to others, this proves I am untrustworthy	.523	.591	.393
5. I am mindful about how I come across to others	.605	.477	.669
34. I am secure in my sense of self-worth	.285	.565	
10. Essentially people like you or they don't; there is no middle ground	.363	.603	.445

Note. Items 34 and 10 were subsequently deleted from the item pool. CC = Community Controls; OC = OCD group; AC = Anxious Controls.

Table 8.6

Internal Consistency for SAM Across Sample

Sample	n	Standardised Alpha (α)	Inter-item correlations		95% confidence interval of standardised alpha	
			Mean	Range	Lower limit	Upper limit
SC	197	.91	.35	.06 -.71	.89	.93
OC	55	.92	.39	-.05 - .88	.89	.93
AC	45	.93	.39	-.08 - .84	.90	.95
CC	45	.86	.29	-.16 - .71	.79	.91

Note. SC = Student Controls; CC = Community Controls; OC = OCD group; AC = Anxious Controls.

Table 8.7

Correlations between Measures of Self-ambivalence, Personality Disorders, Dependency, Morality and Early Developmental Influences

	SAM	OCPD	NAR	BOR	SOC	MORAL	ParAMB
OCPD	0.45						
NAR	0.43	0.48					
BOR	0.71	0.46	0.57				
SOC	0.55	0.27	0.17 ns	0.31			
MORAL	0.20*	0.18ns	- 0.05 ns	0.06 ns	0.18 ns		
ParAMB	0.44	0.24	0.23	0.40	0.33	0.13 ns	
AttAMB	0.65	0.43	0.40	0.63	0.40	0.11 ns	0.44

Note. SAM = Self-Ambivalence Measure, OCPD = Obsessive Compulsive Personality Disorder sub-scale of the Personality Description Questionnaire-IV (PDQ-IV), NAR = Narcissistic Personality Disorder sub-scale of the PDQ-IV, BOR = Borderline Personality Disorder sub-scale of the PDQ-IV, SOC = Sociotropy sub-scale of the Personal Style Inventory (PSI), MORAL = Moral Standards sub-scale of the Guilt Inventory, ParAMB = Ambivalent Parenting Style sub-scale of the Early Developmental Influences Inventory (EDII), AttAMB = Ambivalent Attachment sub-scale of the EDII

* $p < .006$, unmarked correlations were significant at the table wise bonferronni corrected critical alpha of .002, ns = $p > .01$

Table 8.8

Zero-order Correlations Between Measures of Self-Ambivalence, Self-Concept Fragility, Self- Esteem and Decision-Making Difficulties

	SAM	SCC	SI	RSS	REF	RUM	RSE	FIS
SAM								
SCC	.796							
SI	.727	.879						
RSS	.653	.797	.817					
REF	.274 ns	.129 ns	.153 ns	.115 ns				
RUM	.645	.586	.610	.598	.301			
RSE	-.662	-.586	-.399	-.409	.067 ns	-.405		
FIS	.578	.614	.442	.366	.028 ns	.493	-.667	

Note. SAM = Self-Ambivalence Measure, SCC = Self-concept clarity scale, SI = Self sub-scale of the Splitting Index, RSS = Rosenberg Stability of Self Scale, REF = Reflection sub-scale of the Rumination Reflection Questionnaire (RRQ), RUM = Rumination sub-scale of the RRQ, RSE = Rosenberg Self-esteem Scale, FIS = Frost Indecision Scale.

Except where indicated (ns = not significant) all correlations were significant at the table-wise bonferroni corrected critical alpha of .002.

Table 8.9

Zero order correlations between SAM, a composite of SCC, SI, RSS and RUM (Self-F), self-esteem (RSE) and decision making difficulties (FIS)

	RSE	FIS	SELF-F
FIS	-.527		
SELF-F	-.489	.513	
SAM	-.505	.457	.809

Note. SAM = Self-Ambivalence Measure, SCC = Self-concept clarity scale, SI = Self sub-scale of the Splitting Index, RSS = Rosenberg Stability of Self Scale, RUM = Rumination sub-scale of the Rumination Reflection Questionnaire, RSE = Rosenberg Self-esteem Scale, FIS = Frost Indecision Scale.

N = 117; All correlations were significant at p = .000.

Table 8.10

Zero-Order Correlational Analysis between SAM items and RSE and FIS

	RSE	FIS
29. I tend to think of myself in terms of categories such as "good" or "bad"	-.463	.387
41. I am constantly concerned about whether I am a "decent' human being	-.491	.424
45. I am constantly worried about whether I am a good or bad person	-.545	.456
35. I question whether I am a moral person	-.298	.284
15. I fear I am capable of doing something terrible	-.289	.256
38. If I inadvertently allow harm to come to others, this proves I am untrustworthy	-.325	.242
18. I am constantly aware of how others perceive me	-.469	.445
47. When I am with others, I think about whether I look my best	-.317	.239
5. I am mindful about how I come across to others	-.370	.321
26. I question the extent to which others want to be close to me	-.521	.473
2. I doubt whether others really like me	-.623	.513
37. I question whether I am morally a good or bad person	-.456	.386
9. I feel torn between different parts of my personality	-.475	.473
20. I feel that I am full of contradictions	-.493	.432
39. I tend to move from one extreme to the other in how I think about myself	-.456	.467
17. I think about my worth as a person	-.432	.329
40. I think about how I can improve myself	-.210 ns	.243
52. I constantly worry about whether I will make anything of my life	-.507	.452
31. I have mixed feelings about my self-worth	-.609	.457

Note. SAM = Self-Ambivalence Measure, RSE = Rosenberg Self-esteem Scale, FIS = Frost Indecision Scale.

N = 241 – 326

Except where indicated (ns = not significant) all correlations were significant at the table wise bonferroni corrected critical alpha of .001

Chapter 9

Study 2: Self-Ambivalence and Obsessive-Compulsive Disorder

9.1   Introduction

Self-ambivalence has been forwarded as core vulnerability for OCD symptoms and OCD related beliefs (reviewed in chapter 4). Guidano and Liotti (1983) have argued that conflicting beliefs about self-worth underlie obsessive-compulsive symptoms and perfectionistic cognitive styles. Similarly, various authors have framed obsessional personality as related to ambivalence about one's conflicting yearning for approval and autonomy (Millon & Davis, 1996). Despite anecdotal support for these conjectures (see chapter 4), the relationship between self-ambivalence and OCD remains to be empirically examined.

There are four questions in particular that remain empirically unresolved. First, does a relationship exist between OCD symptoms and self-ambivalence? From the perspective of Guidano and Liotti (1983), this relationship would be expected. The authors propose that obsessions and compulsions reflect the person's preoccupation with self-worth, and motivation for restoring self-worth, respectively. The authors suggest that intrusions acquire their obsessional properties because the person appraises these thoughts as threats to valued aspects of self (e.g., moral values). Consequently, these thoughts become the target of the person's attention, rumination and concern. Conversely, according to Guidano and Liotti (1983), compulsions represent overcompensations against fears of social disapproval or moral transgressions. These conjectures support a relationship between OCD symptoms and self-ambivalence.

A second unresolved question is whether the relationship between OCD and self-ambivalence is mediated by other variables. If a relationship was found between OCD and self-ambivalence, this does not demonstrate that self-ambivalence is instrumental in the maintenance of the disorder. It is possible that self-ambivalence relates to OCD because of its spurious relationships to other variables such a depressed mood, decision-

making difficulties and low self-esteem. From the literature surveyed in chapter 6, it is likely that self-ambivalence is associated with a range of difficulties in mood, behaviours and cognition. Is there a relationship between self-ambivalence and OCD, once the effects of these variables are controlled?

Furthermore, it is still not clear whether Guidano and Liotti's (1983) comments regarding obsessionality and self-ambivalence relate more closely to the development of obsessional personality, rather than to OCD. Guidano and Liotti's conceptualisation of obsessive-compulsive patterns relates equally to DSM definitions of OCPD, and OCD. The theorists incorporate features from both diagnostic groups in defining obsessive-compulsive patterns, such as prolonged periods of rumination, indecision, intense phobias, forbidden impulses and neutralising rituals. Further, although, the examples they provide to support their theory clearly depict OCD patients, Guidano and Liotti suggest their theory may apply only to those instances of OCD that emerge on the basis of an obsessional personality. Thus, it is unclear whether self-ambivalence represents vulnerability for obsessional personality traits rather than for OCD symptoms. It is important therefore to investigate whether the relationship between OCD symptoms and self-ambivalence is mediated by the presence of OCPD traits.

Third, there is also the need to articulate how OCD-related beliefs might play a role in mediating the relationship between self-ambivalence and OCD symptoms. Currently, it is poorly understood how the dysfunctional beliefs about responsibility, perfectionism, and unwanted intrusions, which are associated with vulnerability for OCD (Obsessive-Compulsive Cognitions Working Group, 2003), are in themselves associated with self-related schemas and conflicts. To date, no study has addressed the interaction between OCD-relevant beliefs and core representations about self in OCD.

Self-ambivalence may act as a distinct vulnerability factor for OCD, in the context of other OCD-relevant beliefs. It may account for some of the features in OCD that are not accounted for by other beliefs. The symptoms of OCD may reflect the individual's multiple motivations for a positive self-concept, for being perfect, for avoiding threat, and for fulfilling perceived obligations of responsibility. Thus, OCD symptoms may be

the culmination of *several* motives, one of which is to protect a fragile sense of self-worth.

A second possibility is that self-ambivalence is a *meta-vulnerability* for the disorder. In view of the hierarchical model of human cognition (see chapters 4 and 6), self-ambivalence may occupy a superordinate position in relation to the other belief structures. The various beliefs domains relevant to OCD may compensate against one's sense of ambivalence about self-concept. These belief domains may serve to control the person's fluctuations in self-esteem and to provide clear standards for the attainment of a positive sense of self. According to this perspective, the relationship between self-ambivalence and OCD relevant beliefs are organised in hierarchical structure.

There is some support for the proposal that self-ambivalence is central to the array of OCD beliefs. As stated in chapter 3, measures of the various beliefs in OCD have consistently correlated with each other. It is unlikely that a person would hold such beliefs concurrently, on the basis of the person's developmental history, because these belief factors have been linked to different developmental trajectories (see chapter3). Therefore, it appears there may be some core feature to these beliefs that explains their interrelationships. Self-ambivalence may represent, at least to some extent, the "common denominator" in the pattern of intercorrelations. To date, the degree to which self-ambivalence accounts for the interrelationships between the OCD relevant beliefs has not been empirically examined.

The fourth unresolved question concerns the specificity of self-ambivalence to OCD. While, to some extent this issue has been discussed above in reference to negative mood and OCPD, a further question can be posed: Is self-ambivalence specific to OCD compared to other anxiety disorders? As reviewed in chapter 6, research to date is equivocal on whether disruptions in identity and self-esteem can be meaningful constrained to diagnostic groups (McNally, 1993).

Ambivalence about self-concept has been implicated in a range of disorders, including other anxiety disorders. For example, uncertain conceptions of self have been strongly

implicated in social phobia (Clark & Wells, 1995), and more generally in neuroticism (Campbell et al., 1996). For instance, according to Clark and Wells (1995), individuals with social phobia have "unstable self-schemata" (p. 76). Social phobics are purported to shift between seeing themselves as positive and inadequate, different, or odd, depending on whom they are with. Further, with regard to neuroticism, Campbell et al. (1996) found that individuals with low clarity about their self-worth, tended to score highly on neuroticism. This finding supports self-ambivalence as a general vulnerability to anxiety and mood problems.

It is unlikely that self-ambivalence occupies a specific relationship with OCD. If self-ambivalence is central to a range of overly developed fears of social-disapproval or moralistic inclinations, then theoretically, any individual with these fears or inclinations can be portrayed as harbouring inner conflicts about personal worth. In fact, this vulnerability may explain why there is a high level of co-morbidity between OCD and other anxiety, mood and personality disorders (Mavissakalian et al., 1990; Tuekel et al., 2002).

It is also plausible that the different anxiety disorders may be related to different domains of self-ambivalence. For example while self-ambivalence about one's lovability may be common to a range of disorders concerned with social disapproval, self-ambivalence about one's moral character may be specific to disorders such as OCD that involve behaviours and beliefs highlighting the importance of moral standards. Individuals with OCD may not be distinguished on the basis of their levels of self-ambivalence, but rather on domain specific aspects of such ambivalence, such as the morality domain. This question remains to be investigated further.

9.1.1   *This Study*

This study aimed to explore the relationship between self-ambivalence and OCD. More specifically, it explored whether OCD symptoms related to self-ambivalence, and the extent to which this relationship was mediated by other factors. It also explored the role

of self-ambivalence in the cognitive-behavioural model of OCD. Finally, the specificity between self-ambivalence and OCD compared to other anxiety disorders was examined.

Thus, this study addressed four questions. First, is self-ambivalence related to OCD? Based on Guidano and Liotti's (1983) contention that OCD is characterised by ambivalence, significant positive correlations were expected between measures of OCD and self-ambivalence. Further, compared to non-clinicals, the OCD cohort was expected to have significantly higher scores on the measure of self-ambivalence.

Second, if there is a relationship between self-ambivalence and OCD symptoms, is this relationship mediated by obsessional personality traits, low self-esteem, negative mood states or decision-making difficulties? Given that self-ambivalence was construed as conceptually distinct to self-esteem and to decision-making difficulties, it was predicted that self-ambivalence would relate to OCD symptoms even after controlling for the effects of these variables. In view of Guidano and Liotti's model, it was further hypothesised that self-ambivalence would related to OCD, after controlling for depression, anxiety and OCPD traits.

Third, what is the relationship between self-ambivalence and OCD relevant beliefs in the prediction of OCD symptoms? It was hypothesised that these relationships could be expressed hierarchically: (a) Self-ambivalence would account for some of the covariation between OCD-related belief structures, and (b) the relationship between self-ambivalence and OCD symptoms would be mediated by OCD-relevant belief domains.

Finally, to what extent is self-ambivalence specific to OCD in contrast to other anxiety disorders? It was hypothesised that no difference in self-ambivalence would be observed across anxiety disorders. However, it was expected that ambivalence about personal morality would be more specific to OCD compared to other anxiety disorders.

9.2   Method

9.2.1 Participants, Procedure and Materials

The samples in this study are identical to those recruited for study 1. The samples are Students (SC), Community Controls (CC), Anxious Controls (CC), and individuals with OCD (OC). Their size, composition and demographics have been described in chapter 8.

Various questionnaires measuring self-concept, psychopathology, mood states and cognitive variables were administered to the cohorts. The questionnaires completed for this study were completed at the same testing session as study 1 questionnaires. Methodologically, this study is not distinct from study 1, but rather addresses different elements of the questionnaire data set. Thus, details of the procedure have been described in chapter 8.

The questionnaires relevant to this study are (1) The Padua Inventory-Revised (PI-R), (2) The Yale-Brown Obsessive Compulsive Self Report Scale (YBOCS), (3) The Self-Ambivalence Scale (SAM) (4) The Beck Anxiety Inventory (BAI), (5) The Obsessive Beliefs Questionnaire-44 (OBQ-44), (6) The Personality Diagnostic Questionnaire-IV (PDQ-IV), (7) The Beck Depression Inventory-II (BDI-II), (8) The Rosenberg Self-Esteem Scale (RSE), and (9) The Frost Indecisiveness Scale (FIS). The last four questionnaires have already been described in chapter 8. Descriptions of the remaining four questionnaires are provided below.

(1) *The Padua Inventory - Revised* (PI-R) (Burns, Keortge, Formea, & Sternberger, 1996) is a 39-item subset of the 60-item Padua Inventory (Sanavio, 1988). The scale measures the degree of disturbance caused by a range of intrusive thoughts and compulsive behaviours, on a 5-point scale (0= not at all to 4 = very much). Compared to the original Padua Inventory, the PI-R has been demonstrated to have increased discriminant validity with respect to measures of worry and anxiety (Burns et al., 1996). The PI-R comprises five scales: (1) Obsessional Thoughts of Harm to Self or Others (7 items, e.g., "When I hear about a disaster, I think it is somehow my fault"), (2) Obsessional Impulses to Harm Self or Others (9 items, e.g., "I sometimes feel the need

to break or damage things for no reason") (3) Contamination Obsessions and Washing Compulsions (10 items, e.g., " I feel my hands are dirty when I touch money"), (4) Checking Compulsions (10 items, e.g., "I tend to keep on checking things more often than necessary") and (5) Dressing/Grooming behaviours (3 items, e.g., "Before going to sleep, I have to do certain things in a certain order"). Each scale of the PI-R is associated with high internal consistency (α = .0.77 to 0.88) and stability (r = 0.61 to .0.84, 7 month interval) (Burns et al., 1996). See Appendix BB for a copy of the questionnaire.

(2) *The Self Report Yale-Brown Obsessive Compulsive Scale* (YBOCS*)* (Baer, Brown-Beasley, Sorce, & Henriques, 1993) is a self-report version of the interview YBOCS (Goodman et al., 1989). Participants first identify their main OCD symptoms from a list of 58 possible obsessions and compulsions and then respond to a 10 questions about the severity of their primary obsessions and compulsions (e.g., time spent, degree of interference, distress, resistance, perceived control over symptoms). These ten questions are evenly distributed between an Obsessions subscale and the Compulsions subscale. Each item is rated on a scale ranging from 0 (no symptoms) to 4 (extreme symptoms), yielding subscale scores ranging from 0 to 20, and a YBOCS total score from 0 to 40.

In OCD samples, excellent internal consistency and test-retest reliability have been found for the interview YBOCS (alpha = 0.79; r = 0.88) (Steketee, Frost, & Bogart, 1996). The convergence between the self-report and interview versions of YBOCS is high (r = 0.73 for Obsessions, 0.78 for Compulsions and 0.79 for Total Score) (Steketee et al., 1996) . Further, the self report version discriminates well between OCD and non-OCD patients (Steketee et al., 1996). In both the interview and self-report YBOCS, the common cut off score of 16 is commonly used as clinical threshold for OCD. This score has been found to provide good sensitivity but relatively poor specificity for correctly identifying individuals with OCD. See Appendix CC for a copy of the measure.

(3) *The Self-Ambivalence Scale* (SAM) is a newly designed instrument that measures ambivalence about one's general sense of self-worth. The scale is unifactorial and includes 19 items. The items comprise statements about self-uncertainty (e.g., "I have

mixed feelings about my self-worth"), self-dichotomy (e.g., "I tend to move from one extreme to the other in how I think of myself ") and self-preoccupation (e.g., "I think about my worth as a person"). Participants indicate their agreement for each item on a five-point scale (0 = not at all to 4 = Agree totally). As shown in chapter 8, the SAM is associated with adequate internal-consistency, criterion validity and construct validity. A copy of the questionnaire is found in Appendix Y.

(4) *Beck Anxiety Inventory* (BAI) (Beck, Epstein, Brown, & Steer, 1988; Beck & Steer, 1990) is a 21-item measure of anxiety in adults and adolescents. The items consist of descriptive statements about anxiety symptoms (e.g., "Unable to relax" and "Feelings of choking"). Participants rate how much they have been bothered by each symptom during the past week (0 = "Not at all" to 3 = "Severely, I could barely stand it"). The total score of the BAI is computed by summing the individual ratings. The internal consistency, stability and validity of the BAI are well established for both clinical and non-clinical samples (reviewed in Beck & Steer, 1990). See Appendix DD for the company address from where a copy of the BAI can be obtained.

(5) *Obsessive Beliefs Questionnaire-44* (OBQ-44) (Obsessive-Compulsive Cognitions Working Group, in press) is a 44-item self-report measure of beliefs related to OCD. The OBQ-44 is a shortened version of the OBQ-87 (Obsessive-Compulsive Cognitions Working Group, 2001, 2003)**.** In a factor analysis of the OBQ-87, only three factors emerged, and the scale was shortened to 44 items based on item loadings on identified factors across clinical and non-clinical cohorts (Obsessive-Compulsive Cognitions Working Group, in press). The OBQ-44 consists of 3 subscales: (a) inflated responsibility and overestimation of threat (16 items including "Not preventing harm is as bad as causing harm"), (b) Importance and control of thoughts (12 items including "Having nasty thoughts means I'm a terrible person") and (c) Perfectionism and Intolerance of Uncertainty (16 items including " I must be certain of my decisions). Respondents rate the extent to which they agree with each item, using a 7-point rating scale from "strongly disagree" (1) to "agree very much" (7). Internal consistency for all the subscales of the OBQ-44 is high. Standardised alphas for the subscales ranged from .88 to .93 for the OCD cohort, and from .88 to .92 for a mixed non-OCD cohort

(Obsessive-Compulsive Cognitions Working Group, in press). All three subscales have been found to differentiate OCD patients from non-clinical controls, with only the Perfectionism/Uncertainty subscale failing to significantly differentiate OCD from anxious patients (Obsessive-Compulsive Cognitions Working Group, in press). See Appendix EE for a copy of the OBQ-44.

9.3   Results

9.3.1   Self-Ambivalence and OCD Symptoms

Zero-order correlations were conducted between SAM and PI-R for the combined sample comprising SCs, ACs, CCs and OCs. The samples were combined in order to avoid the problem of having a restricted range of scores on the variables (Gravetter & Wallnau, 1996). Given that multivariate outliers can artificially deflate or inflate the correlation coefficient, the distributions of SAM and PI-R were inspected for outliers. No multivariate outliers were found, according to Mahalanobis distance analysis[8]. The SAM correlated significantly with PI-R (Table 9.1). SAM exhibited high level zero order correlations with obsessions about harm (OBS-H), moderate level correlations with impulses for harm (IMP-H), checking compulsions (CHECK) and grooming phenomena (DRESS), and low level correlations with the contamination subscale (CONT).

Partial correlations were computed to investigate the extent to which correlations between PI-R and SAM were independent of confounding variables such as OCPD

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[8] Box plots revealed that there were no univariate outliers for SAM, but several univariate outliers for PI-R. As the distribution of PI-R was significantly positively skewed ($z = 11.89$, $p < .001$), PI-R and its subscales were subjected to square-root transformation to reduce the impact of extreme scores on the correlation coefficient. The transformed distribution was associated with better skewness ($z = 4.438$, $p < .05$) and kurtosis ($zk = 0.016$, ns) for the PI-R distribution. However, these transformations did not appear to significantly alter the correlation coefficients, and thus the variables were left untransformed.

traits, self-esteem, decision-making difficulties, anxiety and depression. These confounding variables related significantly to all PI-R subscales (Table *9.2*). Therefore, four sets of partial correlation analyses were conducted: First, OCPD traits were controlled. Second, self-esteem was controlled. Third, indecision was controlled and fourth, anxiety and depression were controlled (Table 9.1). Controlling for OCPD or FIS made no difference to the strength or significance to the correlations between SAM and PI-R scales. Controlling for RSE resulted in a small attenuation of correlations between SAM and two PI-R subscales: CONT and DRESS. Yet even after controlling for self-esteem, SAM remained correlated with these subscales at $p < .05$. However, when negative mood was controlled, SAM did not correlate significantly with either CONT or DRESS. Controlling for negative mood failed to significantly attenuate the zero order correlations between SAM and the other PI-R subscales. In summary, measures of OCPD, self-esteem, decision making difficulties or negative mood failed to fully mediate the relationship between SAM and most PI-R scales.

9.3.2   Differences in Self-Ambivalence Across Diagnostic Groups

9.3.2.1 Preliminary analyses.

Multiple one-way Univariate Analyses of Variances (ANOVAs) followed by Student Newman Keul (SNK) post hoc tests[9] were conducted to test for differences between the clinical and non-clinical groups on a range of variables, including OCD, mood, self-esteem, decision-making difficulties, OCD-relevant beliefs, and self-ambivalence. Before the omnibus F tests were conducted, the distributions of variables were inspected for univariate outliers, normality and homogeneity of variance.

Outliers were defined as cases with a standard score of at least 3.29 ($p < .001$, two tailed; Tabachnik & Fidell (1996). Several outliers were identified on the BDI and PI-R variables Table 9.3 . Cases involving outliers were excluded from the analyses. There

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[9] For more information about SNKs, see Howell (1997, pp 372-277).

were no univariate outliers for BAI, RSE, FIS, SAM or OBQ-44 scales. Based on skewness and kurtosis ratios, the variables were distributed approximately normally in each group. Furthermore, the variances across groups for each variable were sufficiently homogenous, and met the criterion for homogeneity (i.e., the largest variance should not exceed the smallest by four times; Howell, 1996). Therefore, the variables were analysed without applying transformations to the scores.

The cohorts were compared on several variables including OCD phenomena, depression, anxiety, self-esteem and decision making problems (Table 9.4). The OCD group scored highest on measures of OCD phenomena, including the YBOCS [$F(1, 74)$ = 30.37, p = .000] [10]. The AC group reported the highest level of depression. The AC and SC groups reported significantly more anxiety than the other groups. The OCD and AC groups reported the most difficulties in making decisions, and the lowest self-esteem compared to the other two groups. Finally, although the clinical groups reported higher levels of OCD-related beliefs than the non-clinical groups, no differences were found between the OCD and AC groups on the OBQ-44 scales.

Analyses were also conducted to explore whether males and females differed in self-ambivalence. Combining participants from the four groups, an independent samples t-test was performed to test the equality of SAM scores between males and females. This analysis found no significantly difference in self-ambivalence between males (mean = 30.63, *SD* = 16.13) and females [mean = 30.72, *SD* = 15.97; t (347) = .05, p = .96]. Thus, in the analyses below, gender was not regarded as influential in accounting for any differences in SAM found between the clinical or the non-clinical cohorts.

9.3.2.2 Self-ambivalence in OCD vs. non-clinical groups.

The OCD group was significantly more ambivalent about self-concept than the non-clinical groups. Further, the OCD group scored significantly higher than the non-clinical

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[10] As the non-clinical groups did not complete the YBOCS, the OCD cohort was compared to the AC cohorts for analysis involving the YBOCS.

groups on measures of depression, self-esteem, decision-making difficulties, and OCD relevant belief domains. Therefore, further analyses were conducted to investigate whether the difference between OCD and non-clinical groups on self-ambivalence was due to these other variables. A One-Way Analysis of Covariance (ANCOVA) was conducted to compare the levels of SAM across the OCD and non-clinical groups, while controlling for these variables simultaneously[11].

When power considerations were taken into account, the sample sizes for the comparison between CC and OCD groups was found to be unacceptably low for covariate analysis (observed power = .084). Therefore, the two-non clinical groups were combined in order to increase non-clinical sample size to 158, resulting in an increase in observed power of 0.99. The ANCOVA comparing the OC to the combined non-clinical group revealed a significant result [$F (1, 198) = 34.52$, $p = .000$]. After controlling for confounds, the OC group ($M = 36.47$, $SD = 17.41$) was significantly more ambivalent about self-concept than the combined non-clinical group ($M = 27.41$, $SD = 14.33$).

9.3.2.3 Self- ambivalence in OCD vs. anxious-control groups.

As shown in Table 9.4, no difference was observed between the OC and AC groups on self-ambivalence[12]. Further analyses were conducted to explore uncontrolled factors that could account for the lack of difference between the OCD and AC groups on self-ambivalence. Given that social phobia is associated with ambivalent conceptions about self-worth (Clark & Wells, 1995) all individuals with social phobia were excluded from the AC and OC groups. The OC and ACs were compared to each other and to social phobics. Initial inspections revealed no outliers in any of the three groups on SAM, PI-R, BDI, BAI, RSE, FIS or OBQ-44. The variables were also mostly normally

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[11] By controlling the covariates simultaneously rather than one at a time, the ANCOVA represents a strict test of the hypothesis that the difference in self-ambivalence between OC and non clinical groups is due to confounding factors.

[12] The AC group performed similarly on the SAM, and was more ambivalent than the combined non-clinical groups, even after accounting for covariates such as BDI, FIS, OBQ-44 and RSE [ANCOVA; $F (1, 146) = 20.41$, $p = .000$].

distributed in each group, and homogenous with respect to variance. The results of the analysis failed to reveal significant differences in self-ambivalence between the groups (Table 9.5). Thus, despite controlling for social phobia, the OC and AC groups remained equivalent on self-ambivalence

Second, the lack of difference in self-ambivalence between the groups could be associated with differences in levels of depression and anxiety between the groups. As shown in Table 9.4, the AC group was significantly more anxious and depressed than the OCD group. Therefore, the original OC and AC groups[13] were compared on SAM scores controlling for negative mood (anxiety and depression, as measured by BAI and BDI-II, respectively). Despite controlling for these co-variates, the ANCOVA found no differences between the groups [$F(1, 85) = .08$, ns; observed power = .059; $n_{ocd} = 55$, $n_{ac} = 35$].

Third, given the lack of difference in self-ambivalence between the AC and OC groups, further analyses were conducted to investigate whether the groups differed on particular items on the SAM. As suggested in Chapter 4, Guidano and Liotti (1983) hypothesised that individuals with OCD, base their self-worth on moral and social standards. Thus, it is feasible that individuals with OCD may be more ambivalent about certain aspects of self, in contrast to individuals with other anxiety disorders. While the SAM is conceptualised as a measure of general self-ambivalence, rather than of specific domains of self-ambivalence, some items are nevertheless oriented towards moral or social aspects of self-definition. Multiple t-tests were conducted between the AC and OC groups on each of the 19 items in SAM in order to explore whether certain items on the SAM discriminate between the groups. As shown in Table 9.6, contrary to expectations, no items discriminated significantly between the groups after inflations in Type 1 errors were controlled.

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[13] The qualifier "original" reminds the reader that social phobics were no longer excluded from the following analyses.

9.3.3   Self-Ambivalence and OCD-Relevant Beliefs

Even though self-ambivalence was not found to be specific to OCD, further analyses were conducted to test the hypothesis that the interrelationships between OBQ-44 scales were to some extent accounted for by the SAM. In order to test this proposal, the correlations between OBQ-44 scales were compared before, and then after controlling for SAM. The comparisons of correlations were conducted using the procedures described by Howell (1997, pp 261 - 262) for testing the difference between independent *r*'s (Appendix AA).

For this analysis, the samples were combined in order to avoid the problem of having a restricted range of scores on some variable. As shown in Table 9.7, the OBQ-44 scales were significantly correlated with each other. After partialling out SAM, the correlations remained significant, but significantly reduced ($p < .01$). This result suggests that the SAM accounts for a significant portion of the covariation between the OBQ-44 scales.

Preliminary correlational analysis was conducted to test for relationships between SAM and the OBQ-44 subscales, on the combined samples. From this data set, three multivariate outliers were detected by the Mahalanobis distance method [chi (9) > 27.88, $p < .001$]. These cases were deleted (2 from the OC group, and 1 from the AC group). As shown in Table 9.8, SAM correlated highly and significantly with each OBQ-44 subscale.

Given that various other variables such as self-esteem and indecision were also related to OBQ-44 subscales (Table 9.8) and to SAM (Table 9.1), partial correlations were conducted to control for these potential confounding factors. After accounting for these confounds, SAM still correlated significantly with each OBQ-44 subscale: OBQ-Responsibility ($r = .28$, $n = 230$, $p = .000$), OBQ-Perfectionism ($r = .32$, $n = 230$ $p = .000$) and OBQ-Importance of thoughts ($r = .32$, $n = 230$, $p = .000$).

Next, in order to investigate whether self-ambivalence predicted unique variance in OCD phenomena, SAM and the three OBQ-44 subscales were entered simultaneously as predictors of PI-R variance, within a simple regression model. Before running the analysis, the assumptions of multiple regression were addressed. Three multivariate outliers were detected using the Mahalanobis distance method [χ^2 (4) > 18.467, p < .001], and these cases were deleted from the regression analysis (1 each from the SC, AC and OC groups). Singularity and multicollinearity among IVs were not problematic (r < .710), and therefore, all four IVs were retained in the model. Likewise, the assumptions of normality, linearity appeared to be met, as indicated by the random distribution of residuals in the residual scatterplot. However, the scatterplot showed a violation of homoscedasticity (i.e., a tendency for errors of prediction to increase for larger predicted values). Therefore, the PI-R scale was transformed to its square root. This transformation eliminated heteroscedasticity. The transformed PI-R variable was used in the following regression analyses.

With an N of 245, collectively the four IVs significantly predicted PI-R variance (R =.703 , R2 = .495, Adj R2 = .486; F (4, 241) = 58.944, p < .001). Two of the OBQ-44 subscales, OBQ-Responsibility and OBQ-Perfectionism, independently contributed to the prediction. However, SAM did not significantly add to the prediction of PI-R variance once the effects of the three OBQ-44 subscales were controlled (Table 9.9).

Further analyses were conducted to determine whether the relationship between SAM and PI-R was completely mediated by each of the OBQ-44 subscales. Seven hierarchical regressions were conducted to test for the mediation effects of the OBQ-44 scales individually and in combination with each other. As shown in Table 9.10, no subscale by itself completely mediated the relationship between SAM and PI-R. Using a liberal alpha value (p < .05) the relationship between SAM and PI-R was rendered non-significant only when all three OBQ-44 subscales were entered into the model as covariates.

9.3.4   Summary of Results

The SAM correlated significantly with measures of OCD symptoms and OCD-relevant beliefs even after taking into account variables such as OCPD traits, negative mood states, decision-making difficulties and low self-esteem. Amongst the subscales of PI-R, those relating to harm and checking related best to self-ambivalence. Amongst the subscales of OBQ-44, perfectionism and importance of thoughts related best to self-ambivalence.

Further, individuals with OCD scored significantly higher on SAM, compared to non-clinical individuals, even after controlling for mood variables, self-esteem and decision making difficulties. However, there was no difference in self-ambivalence between the OCD and AC groups.

With respect to the OCD relevant beliefs, self-ambivalence appeared to account for a significant portion of the covariation between the OBQ-44 subscales. After partialling out SAM, the correlations between the three OBQ-44 subscales were significantly reduced. Regression analyses found the relationship between SAM and PI-R was mediated by the OBQ-44 subscales, but no subscale in itself completely explained the relationship between SAM and PI-R.

9.4   Discussion

This study investigated the relationship between self-ambivalence and OC phenomena. It examined whether self-ambivalence was related to OCD severity and the extent to which this relationship was mediated by three belief structures relevant to OCD. Further it explored whether self-ambivalence accounted for some of the covariation between the OCD-relevant belief domains. Finally, it explored if self-ambivalence was specific to OCD compared to other anxiety disorders.

The first group of hypotheses were supported There was a significant association between measures of self-ambivalence and OC phenomena. Moreover, individuals with OCD reported significantly higher levels of self-ambivalence than non-clinicals. This relationship between self-ambivalence and OCD was not mediated by self-esteem,

decision-making difficulties, OCPD traits, or negative mood states. The second group of hypotheses were also supported. As predicted, self-ambivalence accounted for a significant portion of the covariation between the central beliefs domains associated with OCD. Further, the results supported a model of OCD where these belief domains collectively mediated the relationship between self-ambivalence and OCD. The third hypothesis was partially supported. As expected, self-ambivalence was not specific to OCD. However, contrary to predictions, items measuring moral or social ambivalence did not distinguish between OCD and other anxiety disorders. These findings are discussed further below.

First, the association between self-ambivalence and OC phenomena supports the theoretical conjectures forwarded by Guidano and Liotti (1983). Guidano and Liotti proposed that individuals who are ambivalent about self-worth try to protect against becoming aware of negative self-representations, by engaging in compulsive strategies, which essentially are designed to maintain an intact positive self regard. Consistent with this proposal, this study found that individuals with OCD were more ambivalent than community controls, and the phenomena of OCD were correlated with self-ambivalence.

The correlational pattern between self-ambivalence and OCD phenomena suggests that self-ambivalence is especially relevant to certain OCD symptoms. In this study, self-ambivalence related most strongly to checking compulsions, impulses for harm, and obsessions about harm. In contrast, the relationship between self-ambivalence and contamination fears and rituals, and dressing and grooming rituals were weaker. This finding suggests certain types of OCD symptoms are particularly interconnected with one's self-concept. For example, when one is ambivalent about self-concept, he or she may resort to excessive measures in order to ensure that one is not blamed for danger or seen as inadequate. Checking becomes a method of regulating one's sense of self-worth, responsibility, moral obligations and social image. Similarly, impulses or obsessions that are deemed inappropriate, socially irresponsible, or morally repugnant, may be seen as substantial threats to one's already fragile self-image. Controlling these intrusions become highly desirable. However, attempts to avoid or suppress these thoughts can

paradoxically increase the frequency and saliency of the thoughts (Salkovskis & Campbell, 1994; Trinder & Salkovskis, 1994)

These findings are consistent with the suggestion in the literature that different OCD subtypes reflect different motivational strivings (e.g., McKay et al., in press; Rasmussen & Eisen, 1992a; Summerfeldt et al., 1999). For instance, Summerfeldt and colleges (Summerfeldt et al., 2000) speculated that OCD symptoms were motivated by the desire to avoid harm and/or to correct feelings of incompleteness. Using this framework, the desire for certainty about self-worth may in fact be a reflection of one's intolerance for incompleteness more generally. To date, there are no published empirical studies about the relevance of these motivations for different OCD subgroups. Therefore the findings of the current study are important, because they support the claim for some specificity between OCD subtypes and motivations.

Second, this study found that the relationship between self-ambivalence and OCD was not explained by other factors such as self-esteem, decision-making difficulties, negative mood states or obsessional personality traits. Although Guidano and Liotti (1983) suggested that self-ambivalence would be evident in instances of OCD that were based on a obsessional personality traits, the results from this study indicate that such traits do not fully account for the presence of self-ambivalence in OCD. Further, this study suggests that the relationship between OCD and self-ambivalence is not fully explained by indecision and self-esteem. Thus, this study extends upon previous research that has not controlled statistically for these factors (Ruegg, 1994).

The finding that self-ambivalence relates to OCD, even after controlling for self-esteem is important for two reasons. First, it supports the distinction made in the literature between self-ambivalence and self-esteem. Researchers have proposed that self uncertainty and self-esteem are essentially different (Campbell et al., 1996). As shown in this study, self-ambivalence predicts OCD phenomena irrespective of whether one has a positive or negative self regard. Thus, self-ambivalence constitutes important information about the self-concept that is not addressed by self-esteem.

Secondly, this finding clarifies that in OCD, the vulnerability is one of epistemology (Guidano, 1987; Guidano & Liotti, 1983) rather than simply of self-criticism. It is the excessive desire for truth, certainty and knowledge about self, rather than the tendency for self-criticism that makes one vulnerable to OCD. Researchers have found that individuals with OCD tend to have poor self-esteem (Ehntholt et al., 1999) even before the onset of OCD (Fava et al., 1996). However, the researchers have not identified how poor self-esteem contributes to the maintenance of OCD. This study suggests that the relationship between low self-esteem and OCD is explained to some extent by self-ambivalence. Given that individuals with low self-worth tend to have less certainty about their self-worth (Baumgardner, 1990; Greenwald et al., 1988; Tice, 1993), this study proposes that it is this lack of certainty that might specifically predispose those with low self-worth to OCD.

Third, the results support the role of self-ambivalence in explaining a portion of the covariation between the OBQ-44 scales. Self-ambivalence correlated significantly with all the OBQ-44 subscales, and once SAM was partialled out, the intercorrelations between the scales were significantly attenuated. This result casts self-ambivalence as a common theme across the OCD related cognitions. It suggests that one reason why OCD-related beliefs correlate with each other is because they relate commonly to self-ambivalence. As argued by Guidano and Liotti (1983), especially with regards to perfectionism, the various cognitions may in part reflect strategies to simplify the assessment of self-worth. Cognitive styles characterised by perfectionism, responsibility and beliefs about the significance of having and controlling thoughts may provide the person with concrete criteria for moral and/or social standards of self-esteem, which if met, allow the individual to preserve a sense of self-worth.

Thus, those with higher levels of self-ambivalence are purported to harbour stricter mandates for self-esteem, in order to defend against conflictual feelings about self-worth. These belief domains are purported to emerge as compensations against a sense of ambivalence about personal worth. They become criteria for a sense of certainty about self-esteem. In order to feel worthwhile or lovable, the individual believes that he or she must be perfect, responsible, and moral. With increasing levels of self-

ambivalence, these rules become increasingly rigid, proffering added vulnerability for OCD.

This result claries why the various OCD related belief domains are strongly related to one other. Some researchers have suggested that the relationships may reflect problems in the statistical validity of the OBQ-87, and OBQ-44 (Obsessive-Compulsive Cognitions Working Group, 2003; Purdon & Clark, 2002). Researchers have also suggested that certain beliefs are secondary to other beliefs (Bouchard et al., 1999; Ladouceur et al., 1995; Menzies et al., 2000). However, it is possible that the beliefs are interrelated because they all emanate from an ambivalent sense of self-worth.
In describing self-ambivalence as a cognitive precursor to OCD-relevant beliefs, this study acknowledges the hierarchical relationships between cognitive structures (Beck, 1967; Guidano, 1987; Liotti, 1989). In such a hierarchy, higher-order processes such as schemas, core organizing principles and basic beliefs (e.g., Safran et al., 1986) are purported to influence conditional assumptions and instrumental imperatives. We suggest that self-ambivalence is a higher order process within the hierarchy. This depiction has at least two implications for the cognitive model of OCD.

First, it provides a heuristic for how OCD related cognitions are organised. Currently, there is a lack of understanding in the literature how OCD related beliefs coexist with core representations of self. Even though representations of self are regarded as important targets of therapeutic intervention (Emmelkamp, 2002; Mahoney, 1990, 1991), researchers have thus far not articulated how these beliefs relate to such representations in OCD. A heuristic that links these beliefs to underlying representations of self allows for these representations to be addressed in CBT for OCD. This issue will be further discussed in chapter 11.

Second, this depiction has implications for the developmental account of OCD. Currently, there is a lack of understanding about the developmental antecedents for OCD or for OCD-relevant beliefs. Behaviourists have emphasised the role of specific early learning experiences in reinforcing OCD phenomena (Rachman & Hodgson, 1980; Teasdale, 1974), but research has not strongly supported the connection between

early learning contingencies and the development of OCD (Jones & Menzies, 1998; Rasmussen & Tsuang, 1986). Further, researchers have also focused on idiosyncratic developmental factors for perfectionism (Barrow & Moore, 1983; Frost et al., 1991), TAF (Tallis, 1994), and excessive personal responsibility (Salkovskis et al., 1999) but have not considered if there are common experiences that predispose towards these belief domains. This study builds on this literature base. If self-ambivalence motivates the belief-domains, it follows that OCD-relevant beliefs may derive from those developmental factors that have been implicated in self-ambivalence. Therefore, inconsistent parenting and ambivalence attachment relationships with parents may contribute to the emergence of OCD-relevant belief domains such as perfectionism, importance of thoughts and excessive personal responsibility.

Assuming that self-ambivalence plays a part in the genesis of emotional distress, what might be the mechanisms by which it influences the manifestations of symptoms of the disorder? Cognitive models of psychopathology have suggested that dysfunctional assumptions, beliefs and information processing biases may mediate the relationship between self-representations and symptoms (Beck, 1967). In Beck's model, negative self-schemas do not directly precipitate depressive symptoms. Rather, the activation of self-schemas are purported to trigger a series of lower order cognitive products and processes such as negative automatic thoughts, and conditional assumptions, which in turn activate depressive phenomena. Using this framework, we found that the relationship between self-ambivalence and OCD was mediated by OCD-relevant beliefs.

However, no single belief domain was found to fully mediate between self-ambivalence and OCD. In other words, none of the beliefs by themselves was sufficient to fully account for the relationship between self-ambivalence and OCD. Full mediation was only shown when all three belief domains were controlled. Perhaps, each belief domain taps into a different aspect of self-ambivalence. It is possible that excessive personal responsibility and beliefs abut the importance of thoughts relates most closely to ambivalence about personal morality. These beliefs may emerge in order to ensure that one's personal sense of morality remains intact. In contrast, perfectionism may emanate

from the desire to regulate fragile social self-esteem. Perfectionism may emerge as a defence against fears of disapproval and rejection. Some research has supported the relationship between perfectionism and fears of criticism (Bhar & Kyrios, 1999), and considered a link between responsibility concerns and excessive moral standards (Shafran et al., 1996b).

Finally, with regards to the specificity of self-ambivalence for OCD, this study found that self-ambivalence was not specific to OCD, compared to depression or to other anxiety disorders. Given the strong relationship between depression and self-ambivalence, it appears that self-ambivalence is as much related to depression as it is to obsessive-compulsive symptoms. Further, no difference was found between the OCD group and anxious controls even on items in the SAM that measured moral aspects of self-worth. Thus, it appears that moral ambivalence is also not unique to OCD. This conclusion may be premature because there is no evidence that the SAM measures moral ambivalence as distinct from a general sense of ambivalence about the self. Nevertheless, our findings are consistent with the view that uncertain self-concepts do not distinguish between diagnostic groups (McNally, 1993; Ozgul et al., 2003; Tangney et al., 1998; Veale et al., 2003). At best, as indicated in chapter 6, self-ambivalence may be characterised as general predisposing factor, rather than specific vulnerabilities for OCD. This finding however does not diminish the importance of self-ambivalence for the maintenance of OCD. Rather, it equates the construct of self-ambivalence with other common vulnerability factors such as perfectionism, which may explain the high level of comorbidity between OCD and other mood and anxiety disorders.

One reason for why we did not find specificity is that in our study, the OCD and anxious cohorts were indistinguishable on levels of OCD-related belief domains. Past research has shown that OCD related beliefs such as an inflated sense of responsibility and overimporatnce of thoughts were higher in OCD than other anxiety disorder (Obsessive-Compulsive Cognitions Working Group, 2003, in press). Thus, future research needs to compare self-ambivalence across cohorts that differ on these domains.

Future research needs to clarify various issues raised in this study. First, as stated in chapter 1, the causal postulations made in this study have not been directly tested. The associations between self-ambivalence and OCD are likely to be reciprocal rather than directional. Self-ambivalence can equally be the outcome of, or the predisposing factor for OCD phenomena and related beliefs. Future studies would need to investigate whether changes in self-ambivalence lead to changes in OCD phenomena. Experimental method should be used to explore postulations about causation. Several paradigms currently exist for manipulating self-esteem and self-uncertainty (Greenberg & Pyszczynski, 1985; McGregor et al., 2001). These could be utilized in future studies of the impact of self-ambivalence on OCD.

Second, although the relationship between self-ambivalence and OCD processes has been presented as linear, other statistical methods could offer further insights into the relationships between OC phenomena and ambivalent self-esteem. For example modelling techniques such as structural equation modelling may help clarify the mechanism by which ambivalence about self translates into the development of OC cognitions. Trend analysis could be useful in detecting the presence of non-linear relationships between ambivalent self-esteem and other variables.

Third, there is also a need to investigate whether self-esteem difficulties vary in importance for the different OC phenomena and subtypes. This study found some support for the view that self-ambivalence is more relevant for certain OCD subtypes than others – for example, for checking features, compared to contamination concerns. As suggested by numerous authors, these different OCD subtypes may reflect different motivational strivings (McKay et al., in press; Summerfeldt et al., 1999). Perhaps only certain subtypes of OCD are distinguished from other anxiety disorders with respect to self-ambivalence. There is currently a paucity of research on OCD subtypes that are associated with differences in motivation.

This chapter presents the first empirical investigation of self-ambivalence in OCD. In support of Guidano and Liotti's (1983) model of OCD, it found a strong non-specific association between self-ambivalence and OCD symptoms. Further, this study found

that the interrelationships between OCD relevant beliefs were to some extent explained by self-ambivalence. This finding is consistent with the possibility that self-ambivalence is a meta-vulnerability factor for OCD symptoms, because of its potential to promote maladaptive beliefs that in turn facilitate the development of OC phenomena.

Table 9.1

Zero Order and Partial Correlations between PI-R and SAM

PI-R Total and subscales	Zero Order Correlations[a]	Partial Correlations			
		Controlling for OCPD[b]	Controlling for RSE[c]	Controlling for FIS[d]	Controlling for BAI, BDI[e]
PI-R	.55***	.58***	.37***	.42***	.22***
OBS-H	.61***	.62***	.43***	.46***	.20***
IMP-H	.48***	.47***	.40***	.42***	.22***
CONT	.26***	.28***	.14*	.18***	.03
CHECK	.48***	.51***	.28***	.33***	.22***
DRESS	.31***	.33***	.14*	.20***	.09
BAI	.47***	-	-	-	-
BDI	.74***	-	-	-	-
RSE	-.66***	-	-	-	-
FIS	.58***	-	-	-	-

Note. PI-R = Padua Inventory Revised Total; OBS-H = obsessional thoughts of harm to self or others; IMP-H = obsessional impulses to harm self or others; CONT = Contamination obsessions and washing compulsions factors; CHECK = Checking compulsions factor; DRESS = Dressing/grooming factor; BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory - II; RSE = Rosenberg Self-esteem Scale; FIS = Frost Indecision Scale; OCPD = Obsessive Compulsive Personality Subscale of the Personality Diagnostic Questionnaire-IV, SAM = Self-Ambivalence Measure.
[a] n = 250 to 356, [b] n = 97, [c] n = 242, [d] n = 323, [e] n = 246, [f] n = 75.
* $p < .05$, ** $p < .01$, *** $p < .005$.

Table 9.2

Zero-Order Correlations Between Negative Mood, Self-Esteem and Decision Making Difficulties

	PI-R	OBS-H	IMP-H	CONT	CHECK	DRESS	BAI	BDI	RSE
PI-R	1.00								
OBS-H	.81	1.00							
IMP-H	.68	.52	1.00						
CONT	.77	.49	.43	1.00					
CHECK	.86	.65	.46	.51	1.00				
DRESS	.73	.53	.30	.49	.67	1.00			
BAI	.38	.45	.33	.20	.28	.22	1.00		
BDI	.55	.66	.43	.30	.45	.33	.44	1.00	
RSE	-.46	-.51	-.29	-.23	-.44	-.317	-.25	-.74	1.00
FIS	.42	.50	.25	.20	.40	.27	.39	.67	-.67

Note. PI-R = Padua Inventory Revised Total; OBS-H = obsessional thoughts of harm to self or others; IMP-H = obsessional impulses to harm self or others; CONT = Contamination obsessions and washing compulsions factors; CHECK = Checking compulsions factor; DRESS = Dressing/grooming factor; BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory - II; RSE = Rosenberg Self-esteem Scale; FIS = Frost Indecision Scale.

All correlations were significant at p < .001 (n = 250 - 356).

Table 9.3

Number of Univariate Outliers for Variables in Each Sample

Variable	Samples			
	SC	OC	AC	CC
PI-R	3	0	0	0
OBS-H	4	0	0	1
IMP-H	2	2	0	1
CONT	3	0	0	1
CHECK	4	0	1	0
DRESS	2	0	0	0
BDI	1	0	0	1
BAI	0	0	0	0
RSE	0	0	0	0
DEC	0	0	0	0
SAM	0	0	0	0
OBQ-44	0	0	0	0
R	0	0	0	0
P	0	0	0	0
IOT	0	0	0	0

Note. SAM = Self-ambivalence Scale; PI-R = Padua Inventory Revised Total; OBS-H = obsessional thoughts of harm to self or others; IMP-H = obsessional impulses to harm self or others; CONT = Contamination obsessions and washing compulsions factors; CHECK = Checking compulsions factor; DRESS = Dressing/grooming factor; BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory - II; RSE = Rosenberg Self-esteem Scale; FIS = Frost Indecision Scale; OBQ-44 = Obsessive Belief Questionnaire, 44 item version; R = Responsibility scale of the OBQ-44; P = Perfectionism scale of the OBQ-44; IOT = Importance of Thoughts scale of the OBQ-44; SC = Student Controls; AC = Anxious Controls; CC = Community Controls; OC - Obsessive-Compulsive Disorder Group.

Table 9.4

Comparisons of Self-ambivalence, Self-esteem, Indecision, Negative Mood, OCD and

OCD-Relevant Belief Domains Across Diagnostic Groups

	SC			OC			AC			CC		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
PI-R	222	20.88	16.06	63	46.27	26.49	37	28.54	20.99	41	13.29	11.46
OBS-H	221	3.35	3.34	63	7.97	6.84	37	7.14	6.00	40	1.48	2.14
IMP-H	223	3.31	3.39	61	4.25	3.52	37	4.78	4.18	40	1.58	1.63
CONT	222	6.95	5.26	63	13.65	12.71	37	6.68	5.61	40	5.08	4.31
CHECK	221	6.31	5.59	63	16.60	10.77	36	7.19	3.38	40	4.05	3.38
DRESS	223	1.47	2.09	63	4.24	3.93	37	2.30	3.34	41	.95	1.55
BDI	117	10.01	7.20	64	20.56	12.03	37	26.11	14.70	42	3.55	4.07
BAI	225	19.81	13.45	64	19.10	12.71	37	28.08	12.26	43	3.77	3.41
RSE	119	67.03	10.20	50	52.36	12.70	37	51.30	16.71	41	72.07	6.96
DEC	225	40.20	10.83	46	50.91	10.70	36	52.67	12.11	40	33.80	8.39
SAM	206	30.15	13.62	58	36.47	17.41	48	40.33	16.56	43	14.28	9.68
OBQ-44	119	118.42	41.44	54	174.78	56.53	37	179.14	58.79	41	104.02	36.25
R	119	44.66	17.21	64	63.77	25.82	37	63.16	25.19	41	39.17	14.50
P	119	50.93	19.22	64	70.82	20.05	37	75.76	23.93	41	45.66	17.27
IOT	118	24.99	10.11	64	41.38	19.12	37	41.95	16.28	41	29.90	9.28

Note. SNKs = Student Newman Keuls post hoc analyses. For other abbreviations, see Table 1.2. All Fs are significant at the table

wise bonferroni adjusted alpha of .003; all SNKs are significant at .05

[a] AC > CC

Table 9.5

Comparisons of Self-ambivalence and Related Variables Across Clinical Samples, Controlling for Social Phobia

	NAC			SAC			NOC			F	df
	N	Mean	Sd	N	Mean	Sd	N	Mean	SD		
SAM	34	38.41	17.10	14	45.00	14.70	55	36.13	17.79	1.776	2, 73
PI-R	25	24.24	18.41	12	37.50	23.94	60	46.75	26.92	7.432**	2, 73
BDI	25	22.12	13.07	12	34.42	14.91	61	20.21	12.06	4.980*	2, 73
BAI	25	25.04	11.76	12	34.42	11.20	61	18.77	12.90	7.103**	2, 73
RSE	25	55.52	13.99	12	42.50	19.01	47	52.57	12.93	2.660	2, 73
DEC	24	50.04	11.62	12	57.92	11.80	43	50.72	10.66	2.156	2, 73
O44	25	170.32	58.85	12	197.50	56.66	61	174.15	57.85	.523	2, 73

Note. NOC = Individuals with OCD, but not with comorbid social phobia; SAC = = individuals with social phobia but not with comorbid OCD; NAC = Non-Social Phobic AC group; SNKs = Student Newman Keuls post hoc analyses. In the SNKs underlined groups are not significantly different to each other. For other abbreviations, see Table 9.2

** p < table wise bonferroni adjusted alpha of .007; * p < .01 all SNKs reported are significant at .05.

Table 9.6

Comparison of SAM items between AC and OC Samples

SAM items	OC (N = 58)		AC (N = 47)		Df	t test
	M	SD	M	SD		
29. I tend to think of myself in terms of categories such as "good" or "bad"	1.64	1.38	2.13	1.51	103	-1.73
41. I am constantly concerned about whether I am a "decent' human being	1.69	1.54	1.85	1.41	103	-.56
45. I am constantly worried about whether I am a good or bad person	1.47	1.37	1.57	1.47	103	-.39
35. I question whether I am a moral person	1.14	1.374	1.17	1.37	103	-.12
15. I fear I am capable of doing something terrible	1.21	1.50	1.33	1.45	104	-.44
38. If I inadvertently allow harm to come to others, this proves I am untrustworthy	1.14	1.44	.98	1.27	102	.59
18. I am constantly aware of how others perceive me	2.53	1.36	2.52	1.18	103	.02
47. When I am with others, I think about whether I look my best	1.88	1.33	2.17	1.27	103	-1.14
5. I am mindful about how I come across to others	3.05	.91	2.96	.97	104	.51
26. I question the extent to which others want to be close to me	1.66	1.43	2.30	1.46	103	-2.27*
2. I doubt whether others really like me	1.50	1.30	1.81	1.25	104	-1.25
37. I question whether I am morally a good or bad person	1.45	1.49	1.23	1.43	103	.49
9. I feel torn between different parts of my personality	2.13	1.45	2.45	1.33	101	-1.16
20. I feel that I am full of contradictions	2.00	1.54	2.32	1.40	103	-1.10
39. I tend to move from one extreme to the other in how I think about myself	2.17	1.50	2.17	1.48	103	.008
17. I think about my worth as a person	2.58	1.39	2.83	1.19	103	-.10
40. I think about how I can improve myself	3.02	1.12	3.13	1.06	103	-.52
52. I constantly worry about whether I will make anything of my life	2.14	1.55	2.85	1.40	103	-2.45*
31. I have mixed feelings about my self-worth	2.08	1.40	2.51	1.50	103	-1.50

Note. AC = Anxious Controls; OC = Obsessive-Compulsive Disorder Group.

* p < .05

Table 9.7

Intercorrelations between OBQ-44 Subscales Before and After Partialling Out SAM

		Before controlling for SAM				After controlling for SAM					
		N_1	$N_1 - 3$	r_1	r'_1	N_2	$N_2 - 3$	r_2	r'_2	$r'_1 - r'_2$	z
R	IOT	260	257	.698	.867	245	242	.475	.517	.350	3.89**
P	R	261	258	.704	.877	246	243	.484	.530	.347	3.90**
IOT	P	260	257	.687	.848	245	242	.440	.472	.376	4.22**

Note. IOT = Importance of thoughts; R = Responsibility; P = Perfectionism; SAM = Self-Ambivalence Measure.; r'_1 = zero order correlations; r'_2 = partial correlations, controlling for SAM; r' = transformed correlations, using Fisher's (1921) solution (see Howell, 1997, p. 682). z = z statistic; N = number of subjects in each data set.

All rs are significant at .000; ** $p < .01$

Table 9.8

Zero-Order Correlations between OBQ-44 Subscales, SAM and Potential Confounds

	SAM	RSE	FIS	BAI	BDI	PIR
R	.635	-.563	.535	.280	.579	.613
P	.664	-.584	.544	.238	.618	.629
IOT	.667	-.599	.542	.230	.633	.574

Note. IOT = Importance of thoughts; R = Responsibility; P = Perfectionism; SAM = Self-Ambivalence Measure; FIS = Frost Indecision Measure; BDI = Beck Depression Inventory-II; BAI = Beck Anxiety Measure; RSE = Rosenberg Self-Esteem Inventory; PIR = Padua Inventory-Revised. N = 236 - 257.

All correlations were significant at p = .000

Table 9.9

Simple Multiple Regression on PI-R

Predictors	Standardised Beta	sr^2	t	Sig.
R	.247	.153	3.352	.001
P	.306	.185	4.049	.000
IOT	.120	.074	1.610	.109
SAM	.119	.078	1.707	.089

Note. IOT = Importance of thoughts; R = Responsibility; P = Perfectionism; SAM = Self-Ambivalence Measure

Table 9.10

The Mediation of Each OBQ-44 Subscale on the Relationship between SAM and PI-R

Controlling for	Relationship between SAM and PI-R				
	Beta	sr^2	F change	Df	*p* for F change
R	.277	.208	18.910*	1,245	.000
P	.242	.177	13.995*	1,244	.000
IOT	.314	.228	21.207*	1,243	.000
R and IOT	.194	.132	7.830*	1,242	.006
R and P	.153	.106	5.319	1,243	.022
P and IOT	.169	.113	5.887	1,242	.016
R, P, IOT	.119	.078	2.915	1,241	.089

Note. PI-R = Padua Inventory Revised; IOT = Importance of thoughts; R = Responsibility; P = Perfectionism; SAM = Self-Ambivalence Measure; OBQ-44 = Obsessional Beliefs Questionnaire-44.

* *p* < table wise bonferroni corrected value of .007

Chapter 10

Study 3: Self-Ambivalence and Recovery From OCD

10.1 Introduction

Until the mid-1960s, OCD was considered a refractory psychiatric condition. Behavioural interventions such as systematic desensitisation, aversion procedures and blocking procedures did not prove effective with patients suffering from obsessions or compulsions (Foa et al., 1998). Therefore, individuals with OCD were regarded as unsuitable for psychological interventions. However, the prognosis of OCD improved dramatically when clinicians began treating the disorder with exposure and response prevention (ERP) techniques (Meyer, 1966) and serotonergic agents (Rauch & Jenike, 1998). In a review of 330 patients across 12 studies, Foa and Kozak (1996) reported that on average, 83% of patients with OCD respond successfully to ERP. In his meta-analysis of 10 treatment outcome studies Abramowitz (1998) found statistically reliable improvements in OCD symptoms for cohorts treated with ERP. Overall, ERP has been shown to be a highly effective treatment for OCD (reviewed in Franklin & Foa, 1998; Kyrios, 2003).

ERP involves prolonged exposure to distressing stimuli, followed with the prevention of compulsive overt and covert responses, rituals or safety and avoidance behaviours (Kyrios, 2003; Meyer, Levy, & Schnurer, 1974). For example a patient may be asked to repeatedly expose himself or herself to feared situations (e.g., a "contaminated" towel) or to intrusive thoughts (e.g., a repugnant image), without resorting to avoidance or to either overt or covert compulsive responses (e.g., washing hands, praying, counting). The exposure is usually performed gradually, so that situations provoking moderate distresses are confronted before more upsetting ones (Foa et al., 1998). Patients usually progress through a hierarchy of different situations graded from least to most distressing or difficult (Kyrios, 2003). Similarly, response prevention can be applied in a graded manner and incorporated into the development of hierarchies. For example, following

exposure to contamination, the patient may progressively reduce the number of minutes washing their hands, or/and increasingly extend the period between contamination and washing.

There have been various explanations for the positive therapeutic effects associated with ERP (Kyrios, 2003). Commonly these effects are credited to the processes of habituation (see Kyrios, 2003). For a patient with OCD, habituation refers to the disconnection of obsessional stimuli from distress. Some researchers have suggested that habituation occurs because the patient develops helpful beliefs about previously distressing thoughts or external situations (see Marks, 2003). Through the process of collaboration and empiricism in ERP, the patient is provided with opportunities to question their assumptions about threat, personal vulnerability, responsibility, morality and the importance of intrusive thoughts, and to replace them with more adaptive beliefs.

Given that cognitive restructuring is usually integrated with ERP, a variety of strategies have been developed to more specifically change beliefs and assumptions that underlie the disorder (Freeston et al., 1996). In accordance with the cognitive model of OCD (see chapter 3), the goal of cognitive therapy (CT) is to help patients recognise the role of appraisals, thought suppression, avoidance and neutralisation on the maintenance of OCD symptoms (Marks, 2003). The principle focus of CT is on modifying appraisals. A wide range of strategies are used to help patients do this. These strategies include (a) performing a cumulative probability estimate to identify the low probability associated with the feared outcome, (b) helping the patient redistribute responsibility for feared outcomes in order to reduce the overestimation of personal responsibility for negative outcomes and (c) using behavioural experiments to test out the prediction that thoughts are equivalent to action (Marks, 2003).

Research is equivocal on the effectiveness of CT versus ERP. Some research has found that cognitive therapy is associated with smaller effect sizes relative to ERP (van Balkom et al., 1994). However, such research used earlier forms of CT that were not as focussed on OCD-relevant cognitions. Further studies employing more focussed CT

have shown that CT is at least as effective as ERP (Emmelkamp & Beens, 1991; Emmelkamp, Visser, & Hoekstra, 1988; Emmelkamp, Van der Helm, Van Zanten, & Plochg, 1980), with at least one study showing superior effectiveness of CT (Van Oppen, Emmelkamp, Van Balkom, & Van Dyck, 1995b). Studies have indicated that combining ERP with CT is no more effective than CT or ERP alone (Emmelkamp & Beens, 1991). However, there is speculation that the addition of specific cognitive component to treatment leads to decreases in obsessional beliefs (O'Connor, Todorov, Robillard, Borgeat, & Brault, 1999), hence increasing the extent of improvement of OCD symptoms (Van Oppen & Arntz, 1994). Recently there have been suggestions that augmenting ERP with CT may be more particularly helpful for patients with certain OCD symptoms (e.g., pure obsessionals, autogenous obsessions) (Freeston, Leger, & Ladouceur, 2001; Kyrios, 2003; Lee & Kwon, 2003) and for patients unable to carry out exposure exercises (Marks, 2003).

Despite the separation of ERP and CT in research, the distinction remains difficult to operationalise in practice, because similarities between behavioural experiments in cognitive therapy and exposure strategies in ERP. Some authors see little distinction between ERP and techniques that are specifically designed to challenge cognitions (Foa et al., 1998). In practice, CBT often employs both ERP and CT techniques depending on the stage of therapy and the type of patient or presentation. In this chapter, the term CBT is used accordingly to refer to the flexible use of ERP and CT.

Given the impressive efficacy of CBT in reducing OCD symptoms, less attention has been paid to patients with OCD who fail to benefit from CBT or who do not sustain CBT benefits in the longer term. Approximately 2%-25% of patients refuse treatment, and up to 12% of patients drop out of treatment (reviewed in Foa et al., 1983). For those who complete CBT, between 25% and 50% of patients fail to experience significant clinical benefits (Abramowitz, 1998; Foa & Kozak, 1996), and on average between 20% and 30% fail to maintain treatment gains in two to six years post-therapy (Eisen et al., 1999; reviewed in Emmelkamp et al., 1992; reviewed in Foa et al., 1998; reviewed in Foa & Kozak, 1996). Poor response to CBT has also generally been associated with patients suffering from certain OCD symptoms such as compulsive hoarding (de Silva,

2003), primary obsessional slowness (Rachman, 2003) and pure obsessions (i.e.,
obsessions without covert rituals) (de Silva, 2003). Thus, for at least some OCD patients
who are treated with CBT, the disorder continues to disrupt their quality of life.

The psychological factors underlying poor treatment outcomes are little understood.
There is inadequate understanding about the factors before, during and after therapy that
contribute to treatment outcomes for patients with OCD. Of particular relevance to the
present thesis, researchers do not know if self-related beliefs, schemas and ambivalence
impact on treatment outcomes for these patients. Despite much interest in the role of
self-concept in affecting therapeutic outcomes in other disorders such as clinical
depression (Strauman & Kolden, 1997) and personality disorders (Millon & Davis,
1996), surprisingly, no research has explored its importance in informing the prognostic
trajectory of OCD patients undergoing CBT. This chapter explores the extent to which
self-ambivalence is related to the short- and long-term outcomes of CBT for these
patients.

10.1.1 Factors Associated with Treatment Response

Treatment response refers to the noticeable change in the patient after adequate
treatment (Emmelkamp et al., 1992). There is much discrepancy in the literature about
the amount of change required before treatment can be considered successful. Some
researchers have specified the absolute amount of change required for successful
response (Marks, Hodgson, & Rachman, 1975), while others have characterised
treatment outcome according to the relative degree of change from the pre-treatment
baseline (Foa, Steketee, Grayson, & Doppelt, 1983). As an example of the latter
approach, researchers have classified patients as responsive to treatment if they improve
more than 30% (Foa et al., 1983), at least 25% (Hollander et al., 2003), or at least 2
standard deviations (de Haan et al., 1997), compared to pre-treatment baseline.

Foa and colleagues identify three categories of factors in the prediction of treatment
outcomes (Foa et al., 1983). First, there are factors that exist before the patient begins
treatment. These factors refer to enduring personality features, demographic variables,

and features of the disorder itself (e.g, types of symptoms, severity of the disorder, duration of symptoms, onset of the disorder, level of comorbidity). Second, there are factors that occur during therapy. These factors refer to the types of interventions administered by the therapist, the quality of interaction between therapist and patient, and the types of changes that are experienced by the patient. The third category of factors includes features that are present after the completion of therapy. These factors commonly refer to aspects of the disorder itself (e.g., residual symptoms) or to the presence of stressful experiences (e.g., family conflict).

Research has been equivocal about the types of pre-therapy factors that predict treatment response. Some studies have found that pre-existing comorbid pathologies predict the extent to which OCD patients respond to therapy. For example, the existence of personality disorders (McKay et al., 1996a) or depression (Steketee et al., 2001) have been found to negatively affect treatment outcomes for individuals with OCD (see also chapter 2). However, other researchers have found that treatment outcomes have not been influenced by the presence of co-morbid disorders, including personality disorders (Dreessen et al., 1997) and depression (Zitterl et al., 2000).

Some studies have found negative treatment outcomes for OCD patients with over-valued ideations and poor insight (Solyom, DiNicola, Phil, Sookman, & Luchins, 1985). However, other studies have demonstrated improvements for patients with over valued ideas (Lelliot et al., 1988). Further, research is also equivocal about whether patients' expectations about therapy, and their compliance with treatment protocols influence therapy outcomes (reviewed in Foa et al., 1998). Similarly, other factors such as demographics (e.g, marital satisfaction, age, religious background), onset and duration of symptoms, and OCD symptoms, have also failed to predict poor response consistently (reviewed in Steketee, 1993).

Furthermore, despite much interest in predicting treatment outcomes from baseline measurements of belief factors, there is still poor understanding about whether OCD-related beliefs at pre-treatment predict treatment response. For example, only one study to date has explored the potential for the OBQ-87 to predict treatment response. In this

study, only one scale of the OBQ-87 — i.e., the need to control thoughts — was found to predict treatment related changes in OCD symptoms (Emmelkamp, van Oppen, & van Balkom, 2002). However, whether elevations in this belief are sufficient to block progress with treatment is not clear. Thus, no definite conclusion can be drawn about the impact of cognition on OCD treatment responsiveness (for a review, see Wiegartz, Carmin, & Pollard, 2002).

To what extent do pre-therapy levels of self-ambivalence predict post-treatment outcomes? Direct investigations of self-ambivalence and refractory OCD are lacking. Further, it is not clear whether high levels of self-ambivalence at pre-treatment would interfere with treatment. On the one hand, patients ambivalent about their self-worth may be reluctant to lower their defences and to engage with CBT procedures. These patients may resist giving up rituals that are central to the continuous restoration of a positive sense of self. On the other hand, these patients may derive benefit from CBT if their ambivalence is addressed and replaced by more secure conceptions of self-worth. Numerous studies have shown that cognitive based therapies lead to more positive feelings about self (see Anderson & Maloney, 2001), better personality functioning (McKay et al., 1996a) and lower maladaptive defences (Albucher, Abelson, & Nesse, 1998). Thus, the degree to which self-ambivalence interferes with symptomatic improvement may relate to whether or not self-ambivalence is modified during treatment, rather than to the level of self-ambivalence at the start of treatment.

In addition to the pre-therapy factors, a variety of issues during therapy have been implicated in predicting therapy response (reviewed in Stanley & Turner, 1995). For example, Foa, Steketee and Milby (1980) found that treatment response was related to the type of interventions conducted during ERP. In this study, patients who experienced either exposure or response prevention, performed less well in therapy compared to those who received both interventions. Further, Foa and colleagues (Foa et al., 1983) found that therapist characteristics (e.g., cold, unengaging and arrogant) were an important predictor of drop-outs.

Further, positive outcomes in ERP have also been related to the extent to which cognitive changes have occurred for the patients during therapy (reviewed in Emmelkamp et al., 2002). For example, in a study with 28 OCD patients undergoing ERP, Emmelkamp found strong associations between improvements in OCD symptomatology and reductions in OCD-related beliefs, as measured by the OBQ-87 (Emmelkamp et al., 2002). Similarly, other studies have found strong correlations between improvements on measures of OCD symptoms and irrational beliefs (Emmelkamp & Beens, 1991; van Oppen et al., 1995). Support for the role of cognitions in mediating treatment outcome has been demonstrated by studies that have shown that CBT decreases both OCD symptoms and OCD-related beliefs such as inflated responsibility (McLean et al., 2001) and by studies that have successfully produced therapeutic change by specifically targeting OCD-related beliefs (reviewed in Bouvard, 2002).

However, one problem with these studies is that most of them have been based on correlational data. Therefore, as cogently summarised by Emmelkamp et al. (1992; 2002) we do not yet know whether changes in irrational beliefs lead to changes in OCD, whether improvement in OCD affects irrational beliefs, or whether irrational beliefs simply co-vary with OC behaviour. Further, we do not know whether these beliefs are altered by specific cognitive-behavioural techniques implemented in therapy (Steketee, Frost, & Wilson, 2002), shifts in negative mood-states (Emmelkamp, 2002), adjustments in serotonin availability (Yaryura-Tobias, 2002), or by changes in deeper cognitive structures, such as identity and representations of self.

Specifically, no study has yet investigated the extent to which shifts in OCD related beliefs and symptoms are associated with changes in self-concept. Given that self-ambivalence exhibits moderate to strong correlations with both OCD symptoms and OCD-related beliefs, respectively, it is likely that changes in OCD would be related to changes in self-ambivalence. In chapters 5 and 8, it was suggested that self-ambivalence provides the motivational impetus for OCD. If OCD symptoms and related beliefs serve to defend against negative self-images, then once self-ambivalence is reduced, these symptoms and beliefs should abate. While correlational analysis of the

relationships between changes in OCD symptoms, OCD-related beliefs and self-representations may not support a model of causal relations, it is important in the first instance to establish the extent of their interrelationships.

10.1.2 Factors Associated With Treatment Relapse

Relapse refers to the deterioration of symptoms following an initial response to therapy (Emmelkamp et al., 1992). The operationalisation of relapse poses similar problems as operationalising response. For example, how much deterioration is required before the worsening of symptoms is considered indicative of relapse? Some researchers have used absolute criteria for defining relapse. For example, Eisen and colleagues consider patients relapsed if they score more than 16 on the YBOCS, after initially responding to treatment (Eisen et al., 1999). Other researchers have defined relapse on the basis of the amount of deterioration relative to post-test scores. For example, Emmelkamp and colleagues have operationalised relapse as a 20% worsening of symptoms relative to post-test (Emmelkamp et al., 1992).

Little is known about the factors that influence relapse of OCD symptoms following a successful course of ERP. Even though there is little basis to suppose that the factors associated with poor response are also relevant to relapse (Emmelkamp et al., 1992), most research has not adequately identified factors that are specific for relapse compared to those that are relevant to poor response. Also, despite the existence of relapse models that predict relapse as the result of an interaction between the patient characteristics, therapy related activities and post-therapy related experiences (Emmelkamp et al., 1992; Foa et al., 1983), there are virtually no studies that have addressed the roles of these factors in the promotion and precipitation of relapse with regards to OCD. Even more surprisingly, no study has investigated the impact of post-therapy factors in relapse dynamics.

According to some theorists, relapse of OCD symptoms is best understood as the result of various interacting factors (Emmelkamp et al., 1992; Foa et al., 1983). It is assumed that all patients freely make the choice whether to give in to the urge to ritualize.

Whether or not these patients give in to such urges is purported to depend on (a) pre-treatment factors such as the patient's depression and anxiety levels and the age of symptom onset, (b) therapy factors, such as the type of interventions received, the patient's reactivity to exposure, the habituation experienced by the patient within and between sessions and (c) post-therapy factors such as treatment outcome, daily stress, high expressed emotion of significant others and coping skills.

In a study of 21 patients, researchers found that relapse over a two year post treatment period was predicted by post-therapy factors such as coping skills, stress and expressed emotions in significant others (Emmelkamp et al., 1992; Foa et al., 1983). In a further study involving 72 patients who had received CBT, researchers found that post therapy factors only accounted for 39% of the variance at follow-up (Foa et al., 1983). They suggested that treatment response was one of the strongest predictors of treatment maintenance. They found that compared to poor responders, patients who responded highly to CBT maintained their gains best.

Researchers have also considered other predictors of relapse in OCD, but have not found consistent results. For example, supplementing in-vivo-exposure with imaginal exposure to feared consequences (e.g., sickness, injury), has been found to improve long term maintenance in some studies (Foa et al., 1980) but not in others (de Araujo, Iton, Marks, & Deale, 1995). De Haan et al (1997) found that OCD severity at follow-up was predicted by the severity of complaints at the beginning of treatment and at post-treatment. However they found that other variables such as depression, general psychopathology, personality disorder, duration of complaints, domestic variables or employment status did not predict OCD severity at the six month follow up period.

In view of the lack of clear predictors of relapse, clinicians have attempted to improve maintenance through a number of strategies. McKay and colleagues designed a relapse prevention program which comprised of educating patients about the nature of lapses and relapses, encouraging them to engage regularly with exposure and response prevention exercises, and contracting them to maintain brief regular contact with the therapist (McKay, Todaro, Neziroglu, & Yaryura-Tobias, 1996b). They found that the

patients who underwent this program were able to maintain their treatment gains up to two years (McKay, 1997). Maintenance of gains at follow-up have also been found to be facilitated by a combination of other relapse prevention strategies including self-exposure training, cognitive restructuring, interventions with significant others and weekly telephone contacts (Hiss, Foa, & Kozak, 1994).

Despite the apparent efficacy of such programs to improve maintenance, there is a lack of understanding about which of these activities are most important for building resilience, and why they are effective. For instance, Hiss et al. (1994), found that patients who received their relapse prevention program maintained improvements to a greater extent than patients receiving a placebo control relapse intervention called associative therapy. Both groups were equally confident about the efficacy of their respective interventions. However, there were several other differences between the groups that may have accounted for the difference in relapse rate. For example, only the relapse prevention group received nine 15-minute telephone contacts over 12 week post therapy period, and thus had more opportunities to discuss treatment issues with the therapist. Thus, it is unclear as to the extent to which these extra opportunities contributed to maintenance, compared to the other aspects of the program.

Research has been particularly silent about whether self-concept plays a role in buffering against relapse. To what extent is self-ambivalence important in understanding relapse of OCD? The self-ambivalence account of OCD suggests that self-ambivalence is fundamental in explaining relapse-prone OCD. Individuals who leave therapy with unresolved ambivalence about their sense of self-worth should be more vulnerable to relapse, compared to those who have resolved their ambivalence. For the ambivalent patients, rituals would continue to hold appeal as a strategy to restore feelings of self-worth. However, for the patient with more secure and stable conceptions of self, the need for such rituals would be minimal. The extent to which unresolved self-ambivalence plays a role in relapse has yet to be investigated.

This Study

Previous studies have not explored the extent to which self-ambivalence correlates with changes of OCD symptoms and beliefs. Further, no study has examined the extent to which unresolved self-ambivalence is relevant to the reoccurrence of OCD symptoms following CBT. This study investigated the extent to which self-ambivalence was associated with treatment related changes of OCD symptoms and beliefs, and with poor treatment maintenance. Two hypotheses were proposed: First, given the strong correlations between self-ambivalence, OCD symptoms and OCD-relevant belief domains (chapter 9), it was predicted that shifts in self-ambivalence would be associated with shifts in OCD symptoms and OCD related beliefs throughout treatment. Second, it was hypothesised that the post therapy deterioration in symptoms would be related to the extent to which self-ambivalence was resolved in therapy. Individuals with small or no improvement in self-ambivalence during therapy were expected to have less success maintaining treatment gains, compared to individuals who reached more certainty about their self-worth during therapy.

10.2 Method

10.2.1 Participants

The sample selected for CBT consisted of 62 patients (58.1 % females) with a primary diagnosis of OCD who presented to the University of Melbourne Psychology Clinic for CBT. Each patient was assessed for OCD using the ADIS-IV (see chapter 8). Inclusion criteria for the study were a primary diagnosis of OCD for at least one year, and being at least 18 years of age. Patients were excluded from the study if they also suffered from psychotic, neurological or substance related disorders. Patients were also excluded if they had received CBT within the six-month period prior to the assessment. These criteria were adapted from those used by van Oppen and colleagues (Van Oppen et al., 1995a). Forty one of these patients also participated in studies 1 and 2.

The mean age of the sample was 36.06 (SD = 11.58; range = 18 - 67 years). Most patients were born in Australia (77.4%) and spoke only English at home (74.2%). The participants reported living an average of 33.83 years in Australia (SD = 13.25; range =

2.5 to 67 years), and having had an average 12.43 years of formal education (SD = 3.66; range = 1 - 20 years). Nearly forty percent (38.70%) reported currently taking psychotropic medication for anxiety or depression. More than a third of the sample presented with co-morbid major depressive disorder (n = 23; 37.10%), while a minority suffered from co-morbid social phobia (n = 3; 4.80%) or dysthymic disorder (n = 2; 3.2%).

Further analyses were conducted to test for differences in demographics and co-morbidity between participants who completed therapy (i.e., "Completers), and participants who failed to complete therapy (i.e., "Dropouts"). The outcomes of these analyses were performed in order to clarify whether the sample remaining in therapy differed from patients who dropped out of therapy. These analyses served to define the sample to which subsequent analyses applied.

Of the 62 participants selected for treatment, a total of 11 (17.74%) participants failed to complete therapy[14]. Tests of differences between groups at the beginning of therapy were conducted. Chi-square comparisons were performed on nominal variables such as gender, country of birth, and number of patient with co-morbid affective disorders. Independent samples t-tests were conducted to test for differences between the groups on other variables such as negative mood, self-evaluation, personality disorder traits, OCD symptoms, and OCD-related beliefs.

As shown in Table 10.1, the level of comorbidity for anxiety disorders was low in both samples. The level of comorbidity was equivalent in both groups with the exception that marginally more completers than dropouts had co-morbid major depressive disorder. No differences in demographics were observed between the 51 completers and 11 non-completers. Similarly, no significant differences were observed between the groups on any of the other variables (Table 10.2). Therefore, only the 51 participants who

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[14] This drop-out rate is not exceedingly high compared to other studies. A meta-analytic review of CBT by Abramowitz, Brigidy and Roche (2001) found that between 0 and 28% of OCD patients discontinued treatment.

completed therapy were selected for inclusion into this study. Their demographics are presented in Table 10.1.

10.2.2 Procedure

Therapy consisted of 16 weekly 50-minute sessions with a CBT oriented therapist. All sessions were conducted on a one-to-one basis. The therapy included components from behavioural and cognitive approaches such as psychoeducation, behavioural monitoring, prolonged graded exposure, response prevention, contingency management, training in anxiety management, self mastery, cognitive experiments, cognitive reappraisal training, training in attentional refocusing and relapse prevention training. The therapist administered the therapy with the aid of a therapy manual (Kyrios & Hordern, 1999).

The treatment progressed along a series of stages, but was individualised to the patient. First, patients were educated about anxiety and depression, and were provided with skills to manage these emotions. Second, patients were provided with information about OCD, obsessions and compulsions, and were introduced to a cognitive-behavioural formulation of OCD. Third, appraisals about intrusions were identified. Fourth, these appraisals were challenged through a variety of methods including graded exposure and response prevention strategies, and cognitive therapy techniques such as estimating the cumulative probability of negative outcomes and conducting behavioural experiments. Finally, relapse prevention strategies were discussed.

The participants were assessed for their OCD symptoms, OCD-related beliefs, depression, anxiety and self-evaluations at five stages during this process: At the initial assessment prior to the waitlist period (time 1), at the first session of therapy (time 2), mid-way through therapy (time 3), immediately following therapy (time 4), and approximately 6 months post therapy (time 5). The average number of weeks between time 1 and 2 was 10.08 weeks ($SD = 2.64$). The average number of weeks between time 2 and 3 was 9.34 weeks ($SD = 3.62$) and between time 3 and 4, 9.30 weeks ($SD = 3.18$). Time 5 assessment was conducted an average of 21.16 weeks ($SD = 12.22$) post treatment.

10.2.3 Materials

Participants completed a number of self-report questionnaires at these five time periods. The YBOCS was administered to measure OCD severity. Consistent with some researchers' suggestion that the subscales of the YBOCS form distinct clinical dimensions (McKay, Danyko, Neziroglu, & Yaryura-Tobias, 1995), the YBOCS obsession and compulsions subscales were analysed separately. The BAI and BDI-II were used to measure mood difficulties. The RSE and SAM were administered to measure self-esteem and self-ambivalence respectively. The OBQ-44 was administered to measure OCD-relevant belief domains. The three PDQ-IV scales were administered to measure obsessive-compulsive, borderline and narcissistic personality traits. The FIS was given to measure difficulties making decisions. The description and psychometric properties of these questionnaires have been presented in chapters 8 and 9.

10.3 Results

10.3.1 Preliminary Analyses

Multiple Repeated-Measures One-Way ANOVAs were conducted to test for changes in self-ambivalence and other variables (e.g., OCD severity, OCD-related beliefs, negative mood and self-esteem) across the five assessment periods. The distribution of each variable was examined for normality in each time period. No significant departures from normality were detected (i.e., ratios of skewness and kurtosis to their respective standard errors were less than 3). However the assumption of sphericity was not met (Appendix FF). Thus, in order to protect against within-subject effects biases, multivariate F tests (i.e., Wilk's Lambda) were employed to test for non-equivalence of variable-means across the assessment points. Following significant F tests, Helmert post-hoc contrasts were employed to locate significant differences between adjacent time periods.

Table 10.3 presents the means and standard deviations for each variable at each assessment point. Except for the test of self-esteem, all the multivariate omnibus *F* tests were significant at $p < .003$. The non-significant result for self-esteem was attributed to low power (N = 21; power = 0.63), and so, in order to maximise power, a modified univariate *F* (Greenhouse-Geisser) test was performed to test for a main effect for self-esteem. This test was significant at $p = .03$ but not at the bonferroni corrected alpha of .003. Nevertheless, given the exploratory nature of the analyses, post-hoc contrasts were conducted on the self-esteem variable as well.

Most of the variables including OCD severity, Responsibility and Importance of Thoughts significantly improved in the first half of the CBT program (see Table 10.4). Self-ambivalence and perfectionism showed marginal improvement in the first half of therapy, but significantly much more improvement in the latter half of therapy. These improvements were maintained at the 6-month follow up period. Self-esteem improved marginally ($p < .05$) in the first half of the program, but made no further significant gains in the later periods of CBT. No variables improved within the control waiting period (i.e., between time 1 and 2)[15].

Before testing the relationships between changes in self-ambivalence, OCD severity and OCD-related beliefs, preliminary analyses were conducted to examine whether pre-treatment factors such as self-ambivalence, mood states, OCD symptom severity, and OCD-related beliefs predicted therapy response. In accordance with previous research (Foa et al., 1983), response was defined as a 30% improvement on the YBOCS. Of the 51 completers, 75% (n = 38) responded to treatment. These patients were compared to

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[15] Analyses were also conducted to test for changes in dysfunctional personality traits (as measured by the PDQ scales) between pre and post therapy. Scores for these measures were available only at Times 1, 4, and 5, and so were not included in the analyses above. Repeated-Measures One-way ANOVAs were conducted to test for differences in scores between these time intervals. No significant changes were found for Borderline traits [F (2, 36) = 3.14, ns], OCPD traits [F (2, 38) = 3.14, ns] or Narcissistic traits [F (2, 36) = 1.44, ns]. The descriptive statistics for these analyses are shown in Appendix GG.

those who failed to achieve this level of improvement, on a number of pre-treatment variables. Except for the finding that more responders than non-responders had comorbid depression, the two groups were indistinguishable from one another (Table 10.5).

In summary, these analyses showed that with the exception of personality traits, considerable changes in mood, OCD severity, OCD-relevant beliefs and self-ambivalence occurred during CBT. Further, these analyses also demonstrated that responders were similar to non-responders on various pre-treatment factors including self-esteem and self-ambivalence.

10.3.2 Self-Ambivalence and Treatment Response

To what extent then, is improvement in self-ambivalence interconnected with the resolution of OCD symptoms and beliefs? In order to allow for this question to be explored, change scores were calculated. These scores represent the magnitude of change during therapy, such that the larger the score, the greater the degree of improvement in therapy. These scores were calculated by subtracting post-therapy scores (time 4) from pre-therapy scores (time 2).

Zero-order correlations were calculated between change-scores of self-ambivalence on the one hand and the change scores of OCD severity, OCD-related beliefs, negative mood and self-esteem on the other. No multivariate outliers were identified using Mahalanobis distances, and therefore, all 51 completers were included in the analysis. The analyses revealed that many of the changes in therapy were intercorrelated (Table 10.6). Change in self-ambivalence was highly associated with changes in OCD severity, self-esteem and negative mood. Further, changes scores for all three subscales of the OBQ-44 were highly related to the change score of SAM. As shown in Table 10.6, controlling for changes in self-esteem had little effect on the relationships between change measures for self-ambivalence, and changes in OCD severity or OCD related beliefs.

10.3.3 Self-Ambivalence and Relapse

If self-ambivalence constitutes vulnerability for OCD difficulties, then individuals with less improvement in self-ambivalence during treatment should be at a greater risk for relapsing on completion of treatment. In other words, the degree to which self-ambivalence is resolved in CBT should predict the extent to which OCD symptoms maintain after CBT.

Before testing this prediction, the effects of attrition on the sample characteristics were examined. Of the 51 participants who completed the CBT program, only 34 participants were contactable in the follow-up period (i.e., at time 5). In order to detect for differences between the 34 individuals surveyed at the follow-up period and the 17 individuals who were not available at follow-up, multiple t-tests and chi-square tests were conducted to test for differences in demographics, mood, OCD symptoms, OCD relevant beliefs and self-evaluation at time 4. Few differences were observed between the groups (Table 10.7). Those available at follow-up reported significantly higher levels of depression, responsibility and self-ambivalence at time 4, compared to those who were not available at follow-up. Further, a greater proportion of participants who remained at follow up were Australian-born compared to those who were unavailable for follow-up.

Using the sample available at follow-up, correlational analyses were then performed to explore whether the amount of deterioration in OCD in the follow-up period was related to the degree to which self-ambivalence improved during CBT (i.e., between times 2 and 4). Relapse scores were calculated for the obsessions and compulsions scales of the YBOCS (i.e., time 5 minus time 4), such that the larger the score, the greater the deterioration in symptoms following CBT (i.e., the more severe the relapse). Table 10.8 presents the correlations between the degree of relapse, as measured by YBOCS and the degree of treatment related changes in mood, self-ambivalence, self-esteem, OCD symptoms and OCD-relevant beliefs. Change in self-ambivalence during CBT was negatively related to the extent to which YBOCS-Compulsion scores deteriorated in the follow up period. In other words, greater amounts of improvement in self-ambivalence

during therapy were associated with less deterioration in compulsions. Changes in self-ambivalence did not correlate with the post treatment changes in either the YBOCS total scale or the obsessions subscale.

As seen in Table 10.8, other changes during CBT were also related to relapse in compulsions. Relapse in compulsions was significantly associated with the extent to which negative mood, self-esteem and importance of thoughts were addressed in CBT. Relapse in obsessions however was poorly predicted by these variables. Only anxiety change scores were significantly related to relapse in obsessions.

A second series of analyses were conducted to examine whether individuals who met the definition for relapse, experienced less shifts in self-ambivalence during therapy. Following Emmelkamp et al. (1992), individuals were classified, as "relapsers" if their YBOCS scores at follow-up (i.e., time 5) were 25% higher than their YBOCS scores at the end of therapy (i.e., Time 4). Independent samples t-tests were performed to test for differences in SAM change scores between these groups. When relapse was defined on the basis of YBOCS compulsion scale, the relapsers (n = 6) were found to have significantly less improvement in self-ambivalence (mean = 4.33; SD = 5.09) during CBT, compared to non-relapsers [n = 20; mean = 16.75, SD = 19.97; t (24) = 1.49, p = .019, equal variances not assumed]. No differences in self-ambivalence between relapsers and non-relapsers were observed when relapse was based on the YBOCS obsessions subscale [n = 6; t(24) = 0.39, ns] or on the YBOCS total score [n = 7; t(24) = 0.72, ns, equal variances not assumed].

However, to what extent is change is self-ambivalence predictive of relapse of compulsions, beyond the changes in OCD relevant belief domains? Due to the small sample size, partial correlation analyses were performed instead of hierarchical regression analysis[16]. Changes in self-ambivalence did not relate to relapse, once controlling for inflated responsibility (r = -.35, ns) or beliefs about the importance of

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[16] Multiple regression analyses require at least N of 50 for testing the multiple correlation (Green, 1991).

thoughts (r = -.34, ns). However, changes in self-ambivalence remained predictive of relapse of compulsions, after controlling for changes in Perfectionism (r= -.42, *p* < . 05).

10.3.4 Summary of Results

The CBT program was associated with improvements in OCD symptoms, negative mood, OCD relevant beliefs and self-ambivalence. Improvement in self-ambivalence was associated with improvements in OCD severity, OCD-related beliefs, negative mood and self-esteem. Further, the degree to which self-ambivalence was resolved in CBT was related to the extent to which the improvements in OCD compulsions maintained following treatment. Greater amounts of improvement in self-ambivalence during treatment were associated with more stability in compulsions, but not obsessions post-treatment. Changes in self-ambivalence continued to predict relapse after controlling for treatment related changes in perfectionism, but not after controlling for the other OCD-related beliefs.

10.4 Discussion

This study investigated the association between changes in self-ambivalence, OCD symptoms and OCD-related belief domains during a 16-week course of OCD. Further it explored the extent to which the changes in self-ambivalence during treatment predicted treatment gains in the six month post-treatment. Two hypotheses were proposed. First, it was hypothesised that changes during treatment in self-ambivalence would be associated with changes in OCD symptoms and in OCD-related belief domains. This hypothesis was supported. Treatment related reduction in self-ambivalence was associated with reductions in OCD symptoms and related beliefs. Second, it was hypothesised that failure to resolve self-ambivalence in treatment would predict relapse of OCD symptoms. This hypothesis was supported, for compulsions, but not for obsessions. The deterioration in compulsive symptoms in the six months following treatment was predicted by low improvement of self-ambivalence during treatment.

However, failure to resolve self-ambivalence during treatment was not associated with the relapse of obsessions.

10.4.1 The Effectiveness of CBT

Before discussing these results, the changes associated with CBT in this study are outlined. In this study, CBT was found to lead to significant improvements in OCD symptoms (obsessions and compulsions), OCD-related belief domains (perfectionism, inflated sense of personal responsibility and the overestimation of the importance and control of thoughts), negative mood states (depression and anxiety) and self-evaluation (self-ambivalence and to some extent, self-esteem). Seventy-five percent of patients showed significant improvement in their OCD symptoms. This response rate is consistent with rates reported in the CBT outcome literature (Abramowitz, 1998; Foa & Kozak, 1996). These results are also consistent with other studies that have demonstrated the effectiveness of psychological interventions such as ERP and cognitive therapy for OCD symptoms, depressive symptoms and anxiety (Abramowitz, 1998; Foa et al., 1998; Franklin & Foa, 1998).

Also, consistent with other studies (Emmelkamp et al., 2002), this study found that CBT was associated with significant reductions in OCD-related beliefs. Compared to pre-treatment baselines, on average, patients scored significantly lower on all three subscales of the OBQ-44 by the end treatment. The patients' post treatment scores on the OBQ-44 reduced to levels found in non-clinical samples (Obsessive-Compulsive Cognitions Working Group, in press). Indeed, this finding is consistent with the aim of CBT to assist the patient modify maladaptive beliefs and appraisals that underlie psychopathology. In our delivery of CBT, patients were presented with opportunities to question their assumptions about threat, personal vulnerability, personal responsibility, and the importance of intrusive thoughts. They were also helped to replace unhelpful beliefs with more adaptive and evidence-based beliefs. Consistent with both cognitive therapy and behavioural theory, exposure and response prevention was presented both as evidence gathering and anxiety reducing exercises.

Another outcome of the CBT was the reduction in self-ambivalence and to some extent improvement in self-esteem. On average, OCD patients reported less uncertainty, conflict and preoccupation with their self-evaluation at the completion of treatment compared to before treatment. Although, there are many studies that have shown that cognitive based therapies lead to more positive feelings about self (see Anderson & Maloney, 2001; Hattie, 1992; Swann, 1996), this is the first study to show that OCD specific CBT engenders more positive and less ambivalent evaluations of self in OCD patients.

The treatment factors associated with the improvements in self-ambivalence are poorly understood. Given that the treatment did not intentionally seek to change representations of self-worth, it is likely that self-ambivalence reduced in treatment because of non-specific interpersonal aspects of therapy such as the degree of trust and empathy built over time within the therapeutic relationship, rather than because of specific cognitive interventions. Detailed analyses into the timing of changes in self-ambivalence (i.e., Table 10.4) show that the changes in self-ambivalence begin in the first half of CBT but become more significant in the second half. Perhaps this gradual change in ambivalence reflects the patient's growing sense of security and acceptance within the therapeutic relationship. Further, it is likely that self-ambivalence resolves because of the consistent efforts by the therapist to normalise the patient's intrusive ideations (M.Kyrios, personal communication, January 6, 2004). Thus, changes in self-perceptions are likely to be based on the relationship with the therapist and the adoption of new ways of thinking about oneself and one's disorder.

Further, as the patient undertakes more exposure and is successful in the various challenges set by the treatment, their sense of self-efficacy improves leading to greater resolution of self-ambivalence. Then as the patient undertakes more activities, decreases their avoidance and starts to interact with others, their ambivalence further resolves. Clearly, more research is required to explore the therapeutic factors responsible for addressing self-ambivalence. A more comprehensive exploration of these factors is discussed in the next chapter.

10.4.2 Factors Predicting Treatment Response

When pre-treatment factors were considered, patients who responded to treatment were virtually indistinguishable from those who did not respond to treatment. Pre-existing levels of depression or anxiety, comorbidity, maladaptive personality traits, demographics, OCD severity or OCD-related beliefs failed to predict poor treatment response or attrition to CBT. Further, pre-existing levels of self-ambivalence did not predict treatment response or drop-out. This finding is an important contribution to the literature on factors that predict therapy responsiveness (Wiegartz et al., 2002). Despite several conjectures about the importance of pre-treatment factors predicting therapy response (Emmelkamp & Beens, 1991; Emmelkamp et al., 1992; Emmelkamp et al., 2002; eg., Fennell, 1997; Foa et al., 1983; Freeston et al., 1996; Marks, 2003; McKay et al., 1996a; McLean et al., 2001; Steketee et al., 2001; van Oppen et al., 1995), these suggestions were not supported in this study. The factors predictive of responsiveness perhaps relates more to whether it is addressed in therapy, rather than whether it exists before therapy. In our program, despite using a manual to guide therapeutic agenda, all patients were individually formulated and provided with personalized examples and models. Therefore, the level of flexibility associated with our program may be responsible for weakening the influence of factors such as comorbid personality traits, depression and anxiety which have been found in some studies to impede treatment.

What factors during treatment might account for changes in OCD symptoms? First, consistent with past research (Emmelkamp & Beens, 1991; Emmelkamp et al., 2002; Van Oppen et al., 1995a), this study found support for the suggestion that the improvement in OCD symptoms is to some extent related to the amount of change in belief domains such as perfectionism, inflated personal responsibility and estimations of the importance of thoughts. This result is consistent with cognitive hypothesis that changes in beliefs underlie improvements in OCD symptoms (1987; Rasmussen & Eisen, 1992a). According to this hypothesis, the patient experiences fewer symptoms because they become less convinced about their role in causing harm, the need to be perfect and about the significance of thoughts.

Second, there is evidence to support the role of self-ambivalence in the improvement of OCD symptoms and OCD-relevant belief domains. The reduction in self-ambivalence was associated with reduction in OCD symptoms and belief domains. These findings are consistent with the assertion that OCD relates to an excessive concern about one's self-worth (Guidano & Liotti, 1983). As outlined previously, Guidano and Liotti suggest that obsessions are maintained by one's preoccupations with personal violations to personal or social values, while compulsions and perfectionistic behaviours are maintained by desires to restore an idealised concept of self. Further, the results are also consistent with the proposal that an inflated sense of personal responsibility and overestimations of the importance of thoughts also reflect the desire to minimise self-ambivalence.

This study found that improvements in self-esteem did not fully explain the relationship between self-ambivalence change and OCD change. This finding is consistent with the results of study 2 (chapter 9), which showed that the relationships between self-ambivalence, OCD and OCD-related beliefs were not completely mediated by self-esteem. It also provides further support for the argument that self-ambivalence and self-esteem reflect different types of self-evaluation (see chapter 6). More specifically this finding is consistent with the proposal that improvement in OCD does not occur only because one becomes more positive towards the self, but rather because one becomes less ambivalent about the self. The reduction in ambivalence involves developing less dichotomised representations of self, having more clarity about self attributes, and being less preoccupied about self-worth. Split representations of self such as "I am lovable" or "I am unlovable" are replaced by more integrative statements such as "I am accepted by some people and not by others" and "I have traits that are liked by some people". Developing a better appreciation about self in specific contexts and relationships allows one to reach more realistic and integrative definitions about self worth. Greater certainty about self worth involves the development of clarity about personal strengths and flaws. The attainment of such clarity helps the person withdraw from continually revaluating self-worth and ultimately, to develop unconditional self-acceptance.

10.4.3 Treatment Relapse

Overall, the deterioration of OCD in the six-month period post treatment was predicted by improvements during treatment in self-esteem, depression and anxiety. However, when obsessions and compulsions were analysed separately, the study found that post-treatment deterioration in compulsions and of obsessions were predicted by different treatment related changes. Deterioration in obsessions was predicted solely by the extent to which anxiety improved during treatment. Deterioration in compulsions was predicted by a wide range of factors changing in treatment, including self-ambivalence, self-esteem, OCD severity, perfectionism, estimations about the importance of thoughts, depression and anxiety. In short, treatment gains for obsessions versus compulsions appeared to be governed by different factors.

Why would the degree to which self-ambivalence resolves in treatment predict maintenance of compulsions? Perhaps, individuals who resolve self-ambivalence during treatment do not continually need to re-establish a sense of worth by engaging in rituals. In other words, having a secure sense of self may protect against the reappearance of compulsive coping responses. According to the framework provided by Guidano and Liotti (1983), if a patient is extremely ambivalent about his or her self-worth, and regards his or her rituals as necessary to prevent negative feelings about self then it is likely the person will remain vulnerable to compulsions after treatment. The patient, who does not resolve their mixed feelings of self in treatment, may become tempted to re-engage compulsions in order to maintain a positive sense of self. Our data supports this conclusion. Addressing self-ambivalence appears to increase the resilience of patients against compulsions in the six month period following treatment.

Even though the resolution of self-ambivalence predicted resilience against compulsions, two qualifications should be noted. First, further analyses showed that this prediction did not remain once we controlled for inflated responsibility and beliefs about the importance of thoughts. This finding is consistent with the results of study 2, which suggest that self-ambivalence may only proffer vulnerability for OCD symptoms via the presence of more specific beliefs about inflated responsibility and the

significance of negative thoughts. According to this study, treatment gains may depend on the extent to which self-ambivalence is addressed in treatment, because of the impact of ambivalence on one's estimations of personal responsibility and the importance of thoughts. Interestingly, self-ambivalence continued to predict maintenance of compulsions even after controlling for perfectionism. This result is consistent with the suggestion in chapter 9, that perfectionism does not fully mediate between self-ambivalence and OCD.

Second, this result portrays self-ambivalence as an important focus of CBT for the maintenance of compulsions, but not obsessions. Why then is self-ambivalence less relevant for resilience against obsessions? As found, the extent to which anxiety reduced in treatment was the sole predictor of the extent to which obsessions deteriorated after treatment. Perhaps arousal is the primary predictor for the presence and re-emergence of negative intrusive thoughts. Past research has shown that anxious arousal and depression relate to the onset of negative intrusions and the inhibition of one's ability to control or dismiss such phenomena (Edwards & Dickerson, 1987).

10.4.4 Further Research

Given that there are factors that may mediate between self-ambivalence and treatment outcomes, it is important that future studies apply path analytic or structural equation strategies to the investigation of relapse and responsiveness models. Such research should take into account factors that are present before, during and after therapy in order to generate more comprehensive accounts of relapse and response. Despite the existence of relapse models that predict relapse as the result of an interaction between the patient characteristics, therapy related activities and post-therapy related experiences (Summerfeldt et al., 2000), there are virtually no studies that have addressed the roles of these factors in the promotion and precipitation of relapse with regards to OCD.

Second, there is a need to better understand whether self-ambivalence relates differently to changes in particular types of OCD symptoms. As suggested in chapters 2 and 9, it is possible that different OCD symptoms relate to different motivations. For example

washing compulsions may not be motivated by the desire for self-esteem, but rather primarily to restore a sense of safety from illness or death (Jones & Krochmalik, 2003). Accordingly, grooming and arranging compulsions may also not be carried out in order to restore self-worth, but rather to fulfil a craving for completeness (Summerfeldt et al., 2000) or 'just right experiences" (Coles et al., 2003). Perhaps only those symptoms that threaten one's values or are discordant with one's ideal sense of self are most responsive to changes to self-ambivalence. Future studies need to investigate the extent to which self-ambivalence is relevant to the treatment of the various OCD subtypes.

Third, future research should address the issues of causality implied in this study. Due to its cross-sectional, this study did not directly test the causal links between self-ambivalence and OCD. We interpreted correlational data within a causal framework. However it is likely that the relationships among changes in self-ambivalence, OCD symptoms and related beliefs are multi-directional. We still do not yet know whether changes in self-ambivalence lead to changes in OCD, are influenced by OCD, or simply co-vary with OCD. In fact, as alluded to earlier, it is likely that self-ambivalence changes partly because of improvements in OCD. The implication of this interpretation is that self-ambivalence represents in part a disability outcome associated with OCD rather than an aetiological mechanism. Indeed several authors have argued that disturbances in identity and self-worth can be understood as repercussions of living with a mental disorder (Rasmussen & Eisen, 1992a), and this possibility remains to be investigated.

If self-ambivalence contributes to the maintenance of OCD, further research needs to identify factors within treatment that can effectively address self-ambivalence. Numerous treatments have shown promise in addressing self-concept, and these may be adapted for addressing self-ambivalence. These include techniques from CBT (Sookman et al., 1994), schema therapy (Young, 1994) and psychodynamic frameworks (Summerfeldt et al., 2000). Recently, Young and colleagues (Young, Klosko, & Weishaar, 2003) proposed four types of interventions for maladaptive schemas about self: Cognitive techniques, experiential techniques, behavioural pattern breaking and the therapist patient relationship. As suggested above, changes to self perception may be

mainly the result of the therapeutic relationship, rather than particular cognitive techniques. Perhaps the most influential factors for changing self-ambivalence is the provisions of a supportive, normalising, emphatic and stable relationship, where the patient can internalise this unconditional acceptance. In the next chapter we speculate further about the specific therapeutic interventions that may help the patient experience less ambivalence about self.

10.4.5 Conclusion

This study supports the significance of self-ambivalence in the treatment of OCD. It found that the resolution of self-ambivalence was associated with improvements in OCD symptoms and OCD-relevant belief domains. Further it found that unresolved self-ambivalence constituted vulnerability for relapse of compulsive symptoms amongst OCD patients. These findings highlight the importance of self-ambivalence as potentially one of the mechanisms underlying the recovery process in OCD.

Table 10.1

Pre-Treatment Demographics and Comorbidity of Treatment Completers vs Dropouts

	Completers (n = 51)	Dropouts (n - 11)	Test statistics
	Demographic variables		
Age	35.61 (11.96)	38.75 (9.05)	t (55) = 0.71, ns
Education (in years)	12.53 (3.66)	11.71 (3.86)	t (52) = 0.55, ns
Live in Australia (years)	33.43 (13.87)	36.25 (8.89)	t (54) = 0.55, ns
% Female	62.70	45.50	χ^2 (1) = 1.12, ns
% Speak English only at home	90.50	100.00	χ^2 (1) = 0.83, ns
% Australian Born	85.40	87.50	χ^2 (1) = 0.24, ns
% on medication	50.00	50.00	χ^2 (1) = 0.00, ns
	Comorbidity		
% with Major depression	43.10	9.10	χ^2 (1) = 4.50, p = .034
% with Dysthymic Disorder	2.00	9.10	χ^2 (1) = 1.47, ns
% with PTSD	2.00	0.00	χ^2 (1) = 0.22, ns
% with Social Phobia	3.90	9.10	χ^2 (1) = 0.53, ns
% with GAD	2.00	0.00	χ^2 (1) = 0.22, ns
% with Panic Disorder	0.00	0.00	NA
% with Specific Phobia	0.00	0.00	NA

Note. PTSD = Post Traumatic Stress Disorder; GAD = Generalised Anxiety Disorder; PD = Personality Disorder; OCPD = Obsessive-Compulsive Personality Disorder.

Table 10.2

Pre-treatment Characteristics of Treatment Completers vs Dropouts

	Completers (n = 51)	Dropouts (n = 11)	Test statistics
Personality Disorder variables*			
Narcissistic PD	12.09 (2.04)	11.17 (1.83)	t (36) = 1.04, ns
Borderline PD	11.26 (2.10)	12.17 (2.32)	t (35) = 0.96, ns
OCPD	12.00 (1.72)	12.00 (1.26)	t (36) = 0.00, ns
Negate mood states			
BDI	17.46 (12.48)	22.50 (16.74)	t (54) = 0.90, ns
BAI	17.98 (11.78)	26.50 (16.53)	t (54) = 1.60, ns
OCD symptoms			
YBOCS	26.83 (8.20)	30.60 (15.87)	t (49) = 0.52, ns
Y-OBS	13.12 (3.30)	14.40 (5.37)	t (49) = 0.78, ns
Y-COM	11.06 (12.52)	12.60 (7.60)	t (49) = 0.61, ns
OCD relevant beliefs			
OBQ-44	167.82 (60.00)	187.00 (74.63)	t (54) = 0.72, ns
R	61.44 (26.84)	73.50 (32.19)	t (54) = 1.02, ns
P	67.68 (27.82)	73.67 (29.58)	t (54) = 0.55, ns
IOT	39.80 (18.79)	40.83 (19.01)	t (54) = 0.13, ns
FIS*	50.89 (10.17)	51.33 (7.81)	t (37) = 0.10, ns
Self-evaluation variables			
RSE	55.51 (10.90)	55.17 (12.01)	t (47) = 0.07, ns
SAM	31.50 (16.89)	30.50 (20.39)	t (46) = 0.13, ns

Note. * denotes variables measured at time 1 (pre-waitlist); All other variable were measured at Time 2 (session 1). PI-R = Padua Inventory-Revised; YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM = YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ-44 = Obsessive Beliefs Questionnaire; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale; FIS = Frost Indecision Measure; RSE = Rosenberg Self-esteem Inventory; SAM = Self-Ambivalence Measure.

Table 10.3

Omnibus Tests of Significance and Means (SDs) of OCD Symptoms, OCD-relevant Beliefs, Negative Mood and Self-evaluation Across Time Intervals

	Pre waitlist		During CBT						Follow up	
	n_1	Time 1	n_2	Time 2	n_3	Time 3	n_4	Time 4	n_5	Time 5
YBOCS	49	26.20 (8.32)	46	26.83 (8.20)	48	17.58 (7.54)	51	11.73 (7.47)	34	12.41 (8.72)
Y-OBS	49	12.48 (3.65)	46	13.11 (3.30)	48	8.54 (3.62)	51	5.88 (3.55)	33	6.00 (3.78)
Y-COMP	49	11.44 (4.67)	46	11.06 (3.12)	48	7.25 (3.54)	50	4.68 (3.50)	34	5.29 (4.30)
OBQ-44	50	174.20 (57.84)	50	167.82 (60.01)	48	131.27 (46.79)	51	103.18 (45.57)	34	104.44 (47.40)
R	50	63.50 (25.89)	50	61.44 (26.84)	48	48.04 (19.97)	51	38.69 (19.82)	34	38.76 (19.72)
P	50	69.76 (24.52)	50	67.68 (24.82)	48	56.02 (21.16)	51	42.98 (19.89)	34	42.68 (20.91)
IOT	50	42.12 (18.87)	50	39.80 (18.79)	48	28.73 (14.19)	51	22.80 (12,53)	34	24.18 (13. 01)
BDI	50	19.74 (11.05)	50	17.46 (12.48)	48	11.08 (9.53)	51	6.45 (6.36)	34	9.32 (11.11)
BAI	50	18.88 (12.05)	50	17.98 (11.78)	48	12.67 (9.97)	51	8.71 (7.43)	34	10.53 (8.61)
RSE	36	53.28 (12.13)	43	55.51 (10.90)	41	58.44 (11.00)	46	62.74 (11.66)	30	59.67 (14.96)
SAM	40	35.20 (16.28)	42	31.50 (16.89)	41	26.76 (12.94)	46	18.83 (12.51)	30	20.07 (15.99)

Note. PI-R = Padua Inventory-Revised; OBS-H = obsessional thoughts of harm to self or others; IMP-H = obsessional impulses to harm self or others; CONT = Contamination obsessions and washing compulsions factors; CHECK = Checking compulsions factor; DRESS = Dressing/grooming factor; YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM = YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ-44 = Obsessive Beliefs Questionnaire 44 item version; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale; RSE = Rosenberg Self-esteem Inventory; SAM = Self-Ambivalence Measure; ns = non significant.

Except for RSE, where p =.060, all Fs were significant at the table wise bonferroni corrected critical alpha of .003

Table 10.4

Helmert Contrasts of Adjacent Time Intervals on a Range of Variables

	$F_{\text{Time 1 vs Time 2}}$	$F_{\text{Time 2 vs Time 3}}$	$F_{\text{Time 3 vs Time 4}}$	$F_{\text{Time 4 vs Time 5}}$
YBOCS	0.30	43.97***	55.90***	0.41
Y-OBS	0.48	30.66***	34.67***	0.68s
Y-COMP	0.20	55.82***	31.76***	0.74s
OBQ-44	1.53	12.40***	22.31***	2.19
R	0.65	9.79**	12.53***	4.49*
P	0.75	7.57*	20.20***	1.11
IOT	1.40	13.63***	11.52***	0.01
BDI	2.90	12.07***	19.76***	1.31
BAI	0.41	9.54**	8.20**	0.62
RSE	0.54	4.48*	1.90	2.50
SAM	0.70	4.59*	8.84**	.00

Note. YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM = YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ-44 = Obsessive Beliefs Questionnaire; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale; RSE = Rosenberg Self-esteem Inventory; SAM = Self-Ambivalence Measure. Dfs for all variables = 1, 32, with the exception of RSE (1, 19), and SAM (1, 22)

* p < . 05. ** p < .01. *** p < table wise bonferroni corrected critical alpha of .003

Table 10.5

Pre-Treatment Characteristics of Treatment Responders Versus Non-Responders

	Responders (n = 38)	Non-Responders (n - 13)	Test statistics
	Demographic variables		
Age	39.00 (12.83)	34.61 (11.64)	t (47) = 0.26, ns
Education (in years)	13.08 (2.91)	10.73 (5.22)	t (45) = 1.92, ns
Live in Australia (years)	32.33 (12.99)	36.71 (16.43)	t (46) = 0.95, ns
% Female	63.20	61.50	χ^2 (1) = 0.92, ns
% Speak English only at home	94.10	75.0	χ^2 (1) = 2.74, ns
% Australian Born	89.20	72.70	χ^2 (1) = 1.85, ns
% on medication	47.20	62.50	χ^2 (1) = 0.61, ns
Comorbidity			
% with Major depression	55.30	7.70	χ^2 (1) = 8.93, p = .003
% with Dysthymic Disorder	2.60	0.00	χ^2 (1) = 0.35, ns
% with PTSD	2.60	0.00	χ^2 (1) = 0.35, ns
% with Social Phobia	5.30	0.00	χ^2 (1) = 0.71, ns
% with GAD	2.60	0.00	χ^2 (1) = 0.35, ns
% with Panic Disorder	0.00	0.00	NA
% with Specific Phobia	0.00	0.00	NA
	Personality Disorder variables*		
Narcissistic PD	11.95 (1.86)	12.36 (2.42)	t (30) = 0.60, ns
Borderline PD	11.10 (1.87)	11.60 (2.37)	t (35) = 0.50, ns
OCPD	11.86 (1.77)	12.27 (1.68)	t (30) = 0.53, ns
	Negative mood states		
BDI	18.95 (12.36)	12.75 (12.16)	t (48) = 0.14, ns
BAI	19.63 (11.74)	12.75 (10.74)	t (48) = 0.78, ns
	OCD severity		
YBOCS	27.92 (7.48)	21.63 (9.97)	t (44) = 2.04, ns
Y-OBS	13.52 (2.86)	11.13 (4.61)	t (44) = 1.93, ns
Y-COM	11.61 (4.73)	8.50 (4.44)	t (44) = 1.58, ns
	OCD relevant beliefs		
OBQ	167.68 (61.27)	168.25 (58.42)	t (48) = 0.03, ns
R	61.66 (27.40)	60.75 (26.17)	t (48) = 0.10, ns
P	69.29 (24.90)	62.58 (24.90)	t (48) = 0.42, ns
IOT	37.97 (18.34)	45.58 (19.81)	t (48) = 0.23, ns
FIS*	51.91 (9.01)	48.82 (12.39)	t (31) = 0.82, ns
	Self-evaluation variables		
RSE	54.87 (11.87)	57.17 (8.07)	t (41) = 0.62, ns
SAM	32.87 (18.27)	27.64 (12.08)	t (40) = 0.88, ns

Note. * denotes variables measured at time 1 (pre-waitlist); All other variable were measured at Time 2 (session 1). PTSD = Post

Traumatic Stress Disorder; GAD = Generalised Anxiety Disorder; PD = Personality Disorder; OCPD = Obsessive-Compulsive

Personality Disorder. YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM =

YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ = Obsessive Beliefs

Questionnaire; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale;

FIS = Frost Indecision Measure; RSE = Rosenberg Self-esteem Inventory; SAM = Self-Ambivalence Measure.

Table 10.6

Correlations Between Pre-Post Treatment Variables

	Δ SAM	Controlling for Δ RSE[a]
Δ RSE	-.583***	NA
Δ DRESS	.250ns	.12
Δ YBOCS	.490***	.45***
Δ Y-OBS	.401*	.36*
Δ Y-COM	.456***	.40*
Δ OBQ-44	.659***	.58****
Δ P	.680***	.60****
Δ R	.606***	.52***
Δ IOT	.531***	.49***
Δ BDI	.725***	.62****
Δ BAI	.551***	.40**

Note. Δ = change scores; YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM = YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ-44 = Obsessive Beliefs Questionnaire 44 item version; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale; RSE = Rosenberg Self-esteem Inventory; SAM = Self-Ambivalence Measure.

N = 36 - 50 due to missing values on some variables. [a]n = 36 - 39

* p < .05, ** p < .01, *** p < .003, ns = non significant.

Table 10.7

Time 4 Characteristics of Participants Who Were Available vs Uunavailable at Follow -Up

	Participants not available at follow up (n - 17)	Participants available at follow-up (n - 34)	Test statistics
Demographic variables			
Age	34.53 (9.79)	36.19 (13.08)	t (47) = 0.46, ns
Education (in years)	12.00 (4.37)	12.83 (3.23)	t (45) = 0.75, ns
Live in Australia (years)	29.47 (12.68)	35.41 (14.21)	t (46) = 1.41, ns
% Female	58.8	64.7	χ^2 (1) = 0.68, ns
% Speak English only at home	78.6	96.4	χ^2 (1) =3.45, ns
% Australian Born	70.6	93.5	χ^2 (1) = 4.65*
% on medication	40.0	55.2	χ^2 (1) = 0.91, ns
Negate mood states			
BDI	4.35 (3.97)	7.50 (7.09)	t (49) = 1.70*
BAI	6.65 (6.74)	9.74 (7.64)	t (49) = 1.41, ns
OCD severity			
YBOCS	11.29 (7.66)	11.94 (7.48)	t (49) = 0.29, ns
Y-OBS	6.24 (4.12)	5.71 (3.28)	t (49) = 0.50, ns
Y-COM	3.88 (3.32)	5.06 (3.58)	t (49) = 1.12, ns
OCD relevant beliefs			
OBQ	85.47 (38.17)	112.03 (46.88)	t (54) = 2.02*
R	28.29 (13.43)	43.88 (20.61)	t (54) = 2.83**
P	37.65 (18.32)	45.65 (20.37)	t (54) = 1.37, ns
IOT	20.29 (11.55)	20.06 (12.97)	t (54) = 1.01, ns
Self-evaluation variables			
RSE	64.88 (9.35)	61.60 (12.72)	t (44) = 0.10, ns
SAM	14.25 (8.47)	21.27 (13.72)	t (44) = 2.14*

Note. YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM = YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ = Obsessive Beliefs Questionnaire-44; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale; RSE = Rosenberg Self-Esteem Inventory; SAM = Self-Ambivalence Measure.

* p < .05 **p < .01

Table 10.8

Zero-Order Correlations between Change Scores during CBT and Relapse Scores following CBT

Change Scores	Rel-YBOCS	Rel-Y-OBS	Rel-Y-COM
Δ SAM	-.301	-.075	-.466*
Δ RSE	.477*	.341	.536***
Δ YBOCS	-.268	-.099	-.462**
Δ Y-OBS	-.301	-.046	-.497***
Δ Y-COM	-.175	-.091	-.258
Δ OBQ-44	-.209	-.138	-.350*
Δ P	-.129	-.021	-.248
Δ R	-.180	-.144	-.336
Δ IOT	-.259	-.224	-.379*
Δ BDI	-.44*3	-.261	-.621****
Δ BAI	-.595****	-.361*	-.677****

Note. Note. Δ = change scores; YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM = YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ-44 = Obsessive Beliefs Questionnaire 44 item version; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale; RSE = Rosenberg Self-esteem Inventory; SAM = Self-Ambivalence Measure.

Rel-YBOC = changes in YBOCS scores between Time 4 and Time 5; Rel-Y-OBS = changes in YBOC Obsessional Subscale Scores between Time 4 and Time 5; Rel-Y-COM = changes in YBOCS Compulsions Subscale scores between Time 4 and Time 5.

-N = 27 - 33.

p < .05. ** p < .01. ***p < .005. ****p < .001

Chapter 11

Conclusion

Even though theorists have recognised the importance of self-concept in the development, pathogenesis and treatment of anxiety disorders (McNally, 1993; Segal & Kendall, 1990) , researchers have not explicitly sought to understand the role of self in OCD. OCD has been cast as the product of biological, neuropsychological and learning events. More recently, OCD has been understood as the expression of a constellation of thinking styles or belief domains such as perfectionism, an inflated sense of personal responsibility and an overestimation about the importance of thoughts (Obsessive-Compulsive Cognitions Working Group, 1997; Rachman, 2002; Salkovskis, 1985). In contrast, using a blend of developmental and cognitive theory, Guidano and Liotti cast OCD as a reaction against self-ambivalence (Guidano, 1987, 1991; Guidano & Liotti, 1983). They suggested that patients with obsessional features are ambivalent about self-concept, and therefore over-compensate by engaging in compulsive behaviours and perfectionistic standards in order to maintain self-worth.

This thesis subjected Guidano and Liotti's (1983) theory about OCD to empirical study. It asked a basic question "How important is self-ambivalence in the maintenance and treatment of OCD?". It questioned the extent to which self-ambivalence was associated with obsessions and compulsions. It examined whether self-ambivalence was also associated with the various belief-domains underlying OCD. Further, it explored whether the resolution of self-ambivalence was relevant to the recovery from OCD.

To provide a context for exploring these questions, the thesis firstly outlined the phenomenology of OCD. It then explored various aetiological formulations of OCD and identified several gaps in the cognitive behavioural account of OCD. Subsequently, it examined the notion of self-ambivalence and its role in OCD and OCD-related belief domains. Following this examination, the empirical literature on OCD and self-construct was examined. This review found no research on the association between self-

ambivalence and OCD. The concept of self was then explored in order to provide a context for delineating self-ambivalence as distinct from other constructs such as self-esteem. Next, the literature on self-representations in psychopathology was reviewed. This review established a basis for construing self-ambivalence as a general but important vulnerability factor for anxiety, mood and personality disorders. Following these reviews, three studies were conducted. The first evaluated a measure of self-ambivalence. The second investigated the relationship and specificity between self-ambivalence and OCD. The third explored the association between self-ambivalence and recovery from OCD.

Overall, the findings of this thesis can be interpreted as consistent with the suggestion that self-ambivalence may be a vulnerability not only for OCD symptoms but also for the belief domains that maintain the disorder. This thesis found that OCD symptoms and related belief domains were significantly related to self-ambivalence. Further, it found that after controlling for self-ambivalence, the relationships between the various belief domains became significantly weaker. This finding was taken as evidence that the overemphasis on thoughts, responsibility and perfectionism were to some extent responses to an underlying uncertainty about self-concept. Evidence was also found supporting self-ambivalence as an important therapeutic target. It was found that the resolution of self-ambivalence was associated with improvements in OCD belief domains as well as OCD symptoms. In addition, the reduction of self-ambivalence appeared to protect against relapse of compulsive symptoms. In short, we found that self-ambivalence was important for the maintenance and treatment of OCD.

In what way do these results contribute to our understanding of the phenomenology, aetiology, treatment and research of OCD? What implications do these results have for clarifying the motivation underlying obsessions and compulsions, and more broadly for the cognitive behavioural theory of OCD? What implications are there for the effective treatment of OCD? What research is needed to further explore the role of self in OCD? The next sections consider these questions.

11.1 Implications For OCD Phenomenology

This thesis began with a description of the phenomenology of OCD. Obsessions were described as persistent intrusive thoughts, images or impulses that were regarded by the person as distressing, repugnant and dystonic – that is, associated with the sense that the content of the obsession is alien, not within one's control and discrepant from the "kind of thought (one) would expect to have" (American Psychiatric Association, 1994, p. 418). Compulsions were described as behaviours or mental acts that served to alleviate anxiety or to prevent feared outcomes. As noted in chapter 2, the definition of obsessions and compulsions has undergone very little change in psychiatric history.

What has remained the focus of equivocation in the literature is why certain thoughts become the focus of excessive personal attention. Purdon & Clark (2002) have suggested OCD patients exaggerate the importance of certain dystonic intrusions because the thoughts are regarded as evidence of undesirable personal characteristics. They suggest that the thoughts are taken by the individual as signs that he or she possesses undesirable personal characteristics (e.g., "Maybe I am a careless, irresponsible person?"). Similarly Shafran and colleagues have suggested that such thoughts are interpreted as indicators of one's moral integrity (Shafran et al., 1996a). These authors portray intrusive thoughts as important, and distressing because of their potential to challenge preferred notions of self. In this thesis, consistent with Guidano and Liotti (1983), it is further proposed that the capacity for thoughts to threaten preferred representations of self is dependent on one's ambivalence about these representations. The extent to which one perceives such thoughts as markers of self-definition depends on whether or not one is secure about one's self-definition in the first place. Individuals who are secure about their identity and self-worth are likely to discount negative intrusive thoughts as irrelevant to their personality (i.e., they would know that they are not homicidal, or irrational, or careless, and therefore would be more likely to disregard such ego-dystonic intrusions). Perhaps it is no accident that OCD usually begins in adolescence or early adulthood, (Rasmussen & Tsuang, 1986). It is during this phase of development that individuals are said to be most uncertain about who they are, and to be most interested in how they appear to others, their personal

characteristics, morality and their status within a social community (Muus, 1996). It is possible that the search for one's true identity, morality and social status all contribute to a growing vulnerability for OCD.

The results of this thesis also have implications for the function of compulsions. According to DSM-IV, OCD compulsions are "aimed at preventing or reducing distress or preventing some dreaded event or situation" (American Psychiatric Association, 1994, p. 423). Given the findings of this thesis, this depiction of compulsions is limited. The findings of the thesis are consistent with the suggestion that compulsions represent solutions for resolving self-ambivalence – that is, for recommitting to moral and social ideals, and for protecting valued notions of self. These findings support Guidano's (1988) suggestion that "rituals…highlight the typical obsessional striving to…reach a certainty of one's perceived negativity and its possible consequences" (p. 186). An individual may engage in checking or washing compulsions in order to avoid feeling careless, indifferent, dangerous or irresponsible. This interpretation appears to corroborate an early study suggesting that individuals with OCD actively protect against threats to self-esteem (Makhlouf-Norris & Norris, 1972). Research and treatment of OCD have not adequately addressed the self-esteem function served by compulsions. They have failed to appreciate that, apart from preventing some dreaded event or situation, compulsions also serve to prevent the surfacing of one's dreaded self-image.

In this thesis, it is not proposed that all compulsions serve to bolster self-esteem, nor that this is the only objective of compulsions. As shown in chapter 9, washing and grooming compulsions were only weakly related to self-ambivalence. In contrast, compulsions relating to the avoidance of aggression appeared strongly related to self-ambivalence. Perhaps OCD can be subtyped in terms of the extent to which compulsions are motivated to resolve self-ambivalence. The literature has not yet reached consensus on the nature of OCD subtypes (Calamari et al., 2004; McKay et al., in press). As outlined in chapter 2, various frameworks have been proposed for sub-typing OCD, including those based on underlying motivations (Rasmussen & Eisen, 1992b). Summerfeldt and colleagues (Summerfeldt et al., 2000) have suggested that OCD can be differentiated on the basis of whether the motivation is to avoid harm or to

achieve a sense of completeness. It is possible that the desire for self-certainty is an aspect of one's yearning for a sense of completeness – for an experience of self that is not fragmented, unstable or conflicted but rather integrated and secure.

11.2 Implications For The Cognitive Behavioural Model of OCD

How do the results of this thesis address the limitations identified in the cognitive-behavioural model of OCD? As suggested in chapter 3, the cognitive-behavioural model is limited because it does not adequately explain why individuals with OCD hold dysfunctional beliefs about personal responsibility, perfectionism and thoughts, nor explain the basis for the interrelationships between these beliefs. Further it was suggested that the model is not able to account for why relapse occurred in some patients following successful cognitive behavioural treatment.

A close relationship was found between OCD related belief domains and self-ambivalence. Further, when self-ambivalence was statistically controlled, the various belief domains were significantly less related to each other. These results were taken to suggest that OCD related belief domains are reflections of an ambivalent sense of self, such that they function to scaffold positive representations of self. Similarly to compulsions, the belief domains serve to control against the surfacing of undesirable notions of self. They exist as compensations against one's brittle hold on positive self-concept. By holding on to excessively high standards of perfection and responsibility, and overemphasising the need to have appropriate thoughts, individuals avoid questions about their lovability, self-worth or morality. They may use these standards as criteria for self-definition, thus suppressing an underlying sense of ambivalence about self. In short, their endorsement of such high standards provides refuge against self-ambivalence.

This interpretation proposes one reason for why the various beliefs have been found to be very highly associated with each other. In part, each of the belief domains may serve a common end, to protect against self-ambivalence. This interpretation also can help simplify our understanding of the developmental aspects of the belief domains. Even

though a variety of separate learning experiences has been implicated in the development of the various belief domains (see chapter 3), these unique experiences may be less important than proposed. These beliefs may not necessarily develop because of separate developmental experiences. Rather, perhaps the development of the belief domains is related to those early experiences implicated in the development of self-ambivalence. In study 2 (chapter 9), self-ambivalence was related to early experiences of inconsistent parenting, where messages of love and approval were experienced ambiguously by the self. It is thus possible that such early developmental experiences lead to self-ambivalence, which then promotes the development of cognitive compensations. Framed this way, it is proposed that self-ambivalence represents a meta-vulnerability factor for OCD, because it fertilises the development of such standards, which in turn contribute to the emergence of OCD symptoms.

If self-ambivalence is relevant to OCD symptoms, the OCD-relevant belief domains, and the development of these domains, how then does it impact on the recovery of OCD? We found that the reduction in ambivalence was not only associated with improvement in OCD symptoms and belief domains. It was also associated with more stability in post-treatment gains for compulsions. Given that the changes in OCD and self-ambivalence are related, it is possible that self-ambivalence constitutes not only a vulnerability to OCD, but also one mechanism in the recovery and relapse of OCD. We now turn to the implication of this conclusion for the treatment of OCD.

11.3 Implications For The Treatment of OCD

Given the potential importance of self-ambivalence in the recovery process of OCD, it is useful to speculate on some techniques that may purposefully be used to address self-ambivalence. These techniques collectively aim to reframe OCD as related to the tension between competing images of self-worth. Their aim would be to provide corrective attachment experiences for the person, so that he or she can alter cognitive structures that maintain dichotomous appraisals of self. They draw heavily on the framework offered by Young and colleagues (Young et al., 2003) and Rogers (Rogers, 1961).

The premise underlying this treatment approach is that individuals with OCD engage in compulsions in order to protect against self loathing. Thus, an important step in treatment is to help the patient make the connection between compulsions and self-definition. It would be useful for the therapist to probe into the motivations underlying compulsions that relate to the protection of self-worth, moral virtues or social approval. Such probes may be accomplished by the downward arrow technique (Salkovskis, 1999). This part of treatment aims to help the patient recognise their compulsions as continuous efforts to maintain a positive sense of self.

The patient's ambivalent experience of self is hypothesised to originate from early mixed messages of approval and rejection. Thus, the client may have difficulty accepting the therapist as empathic, genuine or trustworthy. Therefore, it is important that the therapist relate to the patient in a consistent, caring, non-judgmental manner that validates important aspects of the client's being (Rogers, 1961; Safran & Segal, 1990). This style of relating allows the patient to feel accepted and understood. The feeling of being understood in a manner that mirrors one's own appraisals of self is helpful to establishing a sense of attunement in the relationship, where the client accepts the therapist as a sensitive and accepting parental symbol. This type of interaction on the part of therapist is consistent with Young's notion of 'limited re-parenting" which aims to provide the client with a new relationship in which to develop a sense of self-worth (Young, 1994; Young et al., 2003).

There are three positive outcomes that may come from this experience. First, from an objects-relations point of view (Kohut & Wolf, 1992), the patient can incorporate the therapist as a positive self-object, substituting parental objects with the therapist's more permissive and accepting stance. Second, through the consistency and transparency of the therapist's relational style, the client's sense of self which is highly dependent on relational cues becomes increasingly stable. Third, the patient's self-esteem is likely to increase when he or she feels accepted, validated, and when progress towards goals becomes apparent (Safran & Segal, 1990).

According to Guidano and Liotti (1983), the choice between ideal and feared self-concept is seen by the patient, in dichotomous terms. OCD patterns are maintained by the desire to affirm the self as good, responsible and lovable, rather than bad, irresponsible and unlovable. Therefore, treatment needs to loosen the rigidity imposed on this way of thinking, and encourage a more integrated view about human qualities. Through gradual discovery, the patient should be invited to consider that positive and negative aspects are present in every person and fall on a continuum.

These techniques may be easily incorporated within the CBT framework. In fact, it is likely that these interpersonal and insight building strategies are employed by competent CBT therapists (Safran & Segal, 1990). In fact, we found that manualised CBT did reduce self-ambivalence. Therefore, none of these methods are novel. However, by flagging them as significant interventions, we draw attention to their application in treating OCD and the rationale that underlies their application.

11.4 Further Research

Many questions still remain regarding the relationship between self-ambivalence and OCD, particularly about the pathways by which self-ambivalence influences the development of OCD. These questions have been outlined in chapters 8, 9 and 10.

It has been proposed that self-ambivalence maintains OCD symptoms and relevant belief domains. However due to the cross sectional questionnaire design used in the current research, the causal aspects of this proposal were not established. It would be important for future research to employ prospective longitudinal designs to explore whether self ambivalence proceeds the onset of OCD symptoms. Further, experimental designs would help investigate whether the induction of self-ambivalence leads to an increase in OCD phenomena such as checking and rumination, and to an increase in the amount of importance placed on thoughts, perfectionism, and responsibility. For example, following Greenberg and others, (Greenberg & Pyszczynski, 1985; McGregor et al., 2001), self-ambivalence may be induced by providing participants with distorted feedback about important aspects of their personality. Participants who perceive moral

values as central to their definition of self can be provided with information that leads them to question their moral integrity. Subsequently, the participants may be asked to solve moral dilemmas. It is expected that those who are made ambivalent about their morality would spend more time and effort in these tasks in order to re-establish their competency in this domain.

Future research should adopt a more idiographic method for assessing important domains of self-definition. Participants could be asked how they see themselves in various contexts or social roles (Harter, 2003; Harter & Whitesell, 2003). Sentence completion tests (Bugental & Zelen, 1950) or repertory grid techniques (Kelly, 1963) may be used to elicit these important domains of self definition. Following the identification of important self-domains or social roles, participants should be asked to rate their certainty about their competency or standing on each domain. This methodology may reveal that certain types of self-domains are associated with more ambivalence for OCDs compared to other anxious individuals.

11.5 Conclusion

In summary, this thesis provides initial support for Guidano and Liotti's (1983) claim that OCD is an escape from unwanted feelings and conceptions about the self. It suggests that people with OCD ritualise and suppress negative intrusions, because these behaviours help negate unwanted self-representations. It shows OCD as a disorder built around the defence against self-loathing. At its core, OCD is maintained by ambivalence about self-worth.

The definition of OCD as a disorder of epistemological doubts about self provides a starting point for re-evaluating and enriching cognitive theory and treatment of OCD. Rather than conceiving OCD solely as the outcome of dysfunctional schemas, belief domains, and appraisals, this new perspective more fully connects OCD to human yearnings and motivations for belonging, adoration and acceptance. This perspective humanises OCD and provides a developmental context for its aetiology and maintenance. It highlights some of the very ordinary motivations that sit behind the

complex behavioural and cognitive symptoms that characterise OCD, and that require attention in therapist-patient interactions.

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Appendices

Appendix A

International Classification of Diseases-10th Edition (WHO, 1992) Criteria for OCD

F42 Obsessive-Compulsive Disorder

The essential feature is recurrent obsessional thoughts or compulsive acts. Obsessional thoughts are ideas, images, or impulses that enter the patient's mind again and again in a stereotype form. They are almost invariably distressing and the patient often tries unsuccessfully to resist them. They are, however recognised as his or her own thoughts, even though they are involuntary and often repugnant. Compulsive acts or rituals are stereotyped behaviours that are repeated again and again. They are not inherently enjoyable, inherently useful tasks. Their function is to prevent some objectively unlikely event, often involving harm to be caused by the patient, which he or she fears might otherwise occur. Usually, this behaviour is recognised by the patient as pointless or ineffectual and repeated attempts are made to resist. Anxiety is almost invariably present. If compulsive acts are resisted the anxiety gets worse.

F42.0 Predominantly obsessional thoughts or ruminations

F42.1 Predominantly compulsive acts (obsessional rituals)

F42.2 Mixed obsessional thoughts and acts

F42.8 Other obsessive compulsive disorder

F42.9 Obsessive Compulsive Disorder

Appendix B

Descriptions of OCD, in DSM-II, DSM-III and DSM-III-R

DSM-II Description of Obsessive Compulsive Neurosis (APA, 1968, p. 40)

In DSM-II (1968), obsessive-compulsive neurosis is defined as "characterised by the persisting intrusions or unwanted thoughts, urges or actions that the patient in unable to stop. The thoughts may consist of single words or ideas, ruminations or trains of thoughts often perceived by the patient as nonsensical. The actions vary from simple movements to complex rituals such as repeated handwashing. Anxiety and distress are often present either if the patient is prevented from completing his compulsive ritual or if he is concerned about being unable to control it himself"

DSM-III Description of Obsessions and Compulsions (APA, 1981, p. 235)

In DSM-III (APA, 1981), obsessions and compulsions are defined separately OCD is described as comprising obsessions and compulsions. Obsessions and compulsions are defined separately. Obsessions are defined as "recurrent, persistent ideas, thoughts, images or impulses that are ego dystonic, i.e they are not experienced as voluntarily produced, but rather as thoughts that invade consciousness and are experienced as senseless or repugnant. Attempts are made to ignore or suppress them" (p. 235). Compulsions are "repetitive and seemingly purposeful behaviours that are performed according to certain rules or in a stereotyped fashion. The behaviour is not an end in itself, but is designed to produce or prevent some future event of situation. However, either the activity is not connected in a realistic way with what it is designed to produce or prevent, or may be clearly excessive. The act is performed with a sense of subjective compulsion coupled with a desire to resist the compulsion (at least initially). The individual generally recognises the senselessness of the behaviour (this may not be true for young children) and does not derive pleasure from carrying out the activity, although it provides a release of tension" (p. 235)

DSM-III-R Description of Obsessions and Compulsions (APA, 1987, p. 247)

In DSM III-R, obsessions are defined as "(1) recurrent and persistent ideas, thoughts, impulses, or images that are experienced, at least initially, as intrusive and senseless…(2) the person attempts to ignore or suppress such thoughts or impulses or to neutralize them with some other thought or action 93) the person recognises that the obsessions are the product of his or her own mind, not imposed from without (as in thought insertion), (4) if another AXIS 1 disorder is present, the content of the obsession si unrelated to it. Compulsions are "(1) repetitive, purposeful and intentional behaviours that are performed in response to an obsession, or according to certain rules or in a stereotyped fashion (2) the behaviour is designed to

neutralise or to prevent discomfort or some dreaded event or situation; however either the activity is not connected in a realistic way with what it is designed to neutralise or prevent or it is clearly excessive. (3) the person recognises that his of her behaviour is excessive or unreasonable (this may not be true for young children; it may no longer be true for people whose obsessions have evolved into overvalued ideas)

Appendix C

Percentage of Obsessions and Compulsions in Recent Studies of OCD Outpatients and Community Samples

Symptoms	Rasmussen & Tsuang (1986)[a]	Okasha et al., (1994)[b]	Foa et al, (1995)[c]	Sobin et al., (1999)		
				Total[d]	Males[e]	Females[f]
Obsessions						
Aggression	22%	41%	23%	80%	79%	82%
Contamination	55%	60%	38%	80%	82%	77%
Somatic Fears	34%	49%	7%	55%	61%	48%
Symmetry	36%	43%	10%	51%	57%	46%
Religion	Na	60%	6%	46%	48%	45%
Sexual	32%	48%	6%	42%	55%	32%
Unacceptable urges	Na	Na	4%	Na	Na	Na
Hoarding	Na	28%	5%	31%	36%	27%
Miscellaneous	14%	37%	1%	39%	41%	38%
Compulsions						
Checking	80%	58%	28%	85%	86%	84%
Repeating	Na	68%	11%	77%	75%	79%
Cleaning/Washing	57%	63%	27%	71%	73%	70%
Counting	21%	48%	2.1%	52%	56%	50%
Tapping/Rubbing	Na	Na	Na	48%	50%	46%
Arranging	Na	53%	6%	36%	34%	38%
Hoarding	Na	46%	4%	26%	32%	21%
Mental rituals	Na	Na	11%	Na	Na	Na
Miscellaneous	Na	59%	12%	17%	11%	21%

Note. Na = No data available.

[a] n = 44 OCD outpatients. [b] n = 90 OCD outpatients attending an outpatient psychiatric clinic in Cairo, Egypt. [c] n = 425 OCD outpatients patients presenting for treatment across 7 hospital clinics in the USA and Canada. Only primary obsessions and compulsions are noted. [d] n = 100 members of an OCD self-help network in the USA. [e] n = 44. [f] n = 56.

Appendix D

52 Item-Pool for Self-ambivalence Measure

1. My opinion of myself depends on what others think of me

2. I doubt whether others really like me

3. I am insecure about the way I look physically

4. I am always careful in behaving according to my morals

5. I am mindful about how I come across to others

6. Essentially people are either trustworthy or they are not. There is simply no in-between state of trustworthiness

7. I strive to be physically attractive

8. I believe "If you do something, do it well, or not at all!"

9. I feel torn between different parts of my personality

10. Essentially people like you or they don't; there is no middle ground

11. Essentially people can be separated into those who are competent and those who are not

12. In evaluating my physical appearance, I attend to only one or two of my features

13. I find myself categorising people in terms of their competency

14. I know what makes me unique compared to others

15. I fear that I am capable of doing something terrible

16. I have always wondered about whether I am competent in my chosen area of work or study

17. I think about my worth as a person

18. I am constantly aware of how others perceive me

19. I only wear flattering clothes in public

20. I feel that I am full of contradictions

21. I move from one extreme to the other in evaluating my competency

22. I doubt my competency in study or work

23. Essentially people are either good or bad

24. Essentially people are physically attractive or they are not; there is no middle ground

25. It is possible to be perfectly good looking

26. I question the extent to which others want to be close to me

27. I question my ability to solve problems

28. I worry about how I look physically

29. I tend to think of myself in terms of categories such as "good" or "bad"

30. Deep down I feel as if I <u>have</u> OR <u>don't have</u> what it takes to be popular

31. I have mixed feelings about my self-worth

32. I am secure about my physical attractiveness

33. I feel I am <u>competent</u> OR incompetent in everything I do

34. I am secure in my sense of self-worth

35. I question whether I am a moral person

36. I doubt whether I actually have "true" friends

37. I question whether I am morally a good or bad person

38. If I inadvertently allow harm to come to others, this proves I am untrustworthy

39. I tend to move from one extreme to the other in how I think of myself

40. I think about how I can improve my self

41. I am constantly concerned about whether I am a "decent" human being

42. I always stay true to my sense of morality

43. I am careful not to offend people

44. I think about my physical appearance

45. I am constantly worried about whether I am a good or bad person

46. I am interested in the question "Am I competent at something?"

47. When I am with others, I think about whether I look my best

48. I strive to do well in all jobs or tasks that are assigned to me

49. I avoid disappointing others

50. I am told that I take things too personally

51. When I perform less than expected on some task, I tend to feel a failure

52. I constantly worry about whether I will make anything of my life

Appendix E

Screening for Psychiatric History

Please answer the following 5 questions. For each question, circle Yes or No

1. Do you currently receive treatment for depression, anxiety or some other psychiatric problem?

| Yes | No |

2. Do you currently have a psychiatric diagnosis?

| Yes | No |

3. Are you currently addicted to illicit drugs or alcohol?

| Yes | No |

4. Have you ever received treatment for depression, anxiety or some other psychiatric problem?

| Yes | No |

5. Have you ever been diagnosed as suffering from a psychiatric disorder?

| Yes | No |

Please note:

At this stage of the project, we require participants who have never had a psychiatric diagnosis. If you answered YES to any of the above questions, or believe that you may be suffering from a psychiatric disorder, you do not need to proceed with the questionnaires. If you believe that you have (or have a history of) psychiatric difficulties and would still like to take part in this study, please contact Mr Sunil Bhar on 8344 5572 for further information. Thank you.

Appendix F

Recruitment Poster Advertising the Study for Community Controls

Would you like to take part in psychological research?

We are exploring the relationship between thinking styles and emotions such as anxiety and depression. We need people between 18 and 65 years old, who have never suffered from a psychiatric problem to volunteer for this project. Participation involves completing a few questionnaires. The study is approved by the University of Melbourne Ethics Committee HREC 990419. Please contact Sunil on s.bhar@pgrad.unimelb.edu.au or (03) 8344 5572 to receive your questionnaire pack.

Appendix G

Recruitment Poster Advertising the Study for Anxious Controls

Are you suffering from Panic Attacks, Depression, Anxiety, Obsessions, Constant Worry, Social Anxiety? If you get extremely anxious or depressed, please consider participating in research approved by the University of Melbourne (HR990419). The research investigates the relationship between self image, anxiety and depression. It involves an interview and completing questionnaires. For details please contact Mr Sunil Bhar on 8344 5572 or s.bhar@pgrad.unimelb.edu.au.

Appendix H

Plain Language Statement for Students

Project Title: The significance of self-esteem and beliefs in anxiety conditions

University of Melbourne Ethics Committee clearance number: 990 419

This study is being conducted by Mr Sunil Bhar as part of the requirements for the degree of Doctor of Philosophy (PhD) in Psychology, under the supervision of Dr Michael Kyrios. The study focuses on the way that individuals see themselves, and explores the relationship between self-perception, beliefs, emotions, anxiety, obsessionality and related experiences.

You are asked to complete 19 questionnaires that measure self-evaluation, thinking styles, obsessional behaviours and mood states, which are part of normal everyday life. You are also asked to complete questionnaires on aspects of the way that you relate with others, and early experiences. These questionnaires take approximately an hour to complete.

No identifying information is asked for, so all the information you provide is confidential, subject to legal requirements, and your anonymity is assured subject to legal limits. You are free to withdraw from this project at any time, and request that the information you provide not be included in the project. As some questions may cause discomfort, you are free to refrain from answering parts of the questionnaires, although we encourage you to complete all items. Your decision to withdraw or limit your participation will not affect your university grades or relationship with the investigators. All data will be destroyed 5 years after publications related to the findings of the project.

All participants will received a debriefing sheet explaining the aims of the study. You may also ask the researcher to send you a summary of the outcome of this project, when it becomes available. Should you wish to discuss any aspect of your participation in this project or any issues it has raised for you, please feel free to contact us at any time about this project. If you wish to talk to a trained counsellor about your reactions to the questionnaires, please contact the university of Melbourne's Counselling service on 9344 6927.

Thank you for participating.

Sunil Bhar,   Dr. Michael Kyrios,
Ph.D. Candidate,   Senior Lecturer,
Department of Psychology,   Department of Psychology,
University of Melbourne   University of Melbourne
Phone: 9344 5572   Phone: 9344 5572

Appendix I

Debriefing Sheet for Student Participants

Project Title: The significance of self-esteem and beliefs in anxiety conditions

University of Melbourne Ethics Committee clearance number: 990419

This sheet provides information about the background and aims of this project.

This study explores the relationship between obsessive-compulsive (OC) phenomena and ambivalent self-evaluation (ASE). OC phenomena refer to intrusive thoughts, images or impulses, and to behaviours that are compulsive, repetitive and ritualistic (eg., checking gas appliances, ritualistic hand washing). A diagnosis of obsessive compulsive disorder (OCD) may be warranted if these phenomena are associated with extreme distress or with disruption to daily functioning.

Although the prevalence of OCD is less than 3%, nearly everybody exhibits some OC phenomena in mild form, and usually with minimal anxiety. Studies have found that normal individuals do report having OC phenomena such as the impulse to say something rude and the thought of harm befalling loved ones (eg., Rachman, S. & deSilva, P, 1978. Obsessions and compulsions in non-clinical sample. Behaviour Research and Therapy, 12, 229-235.). Therefore, OC phenomena are usually regarded as lying on a continuum from normality.

A number of theories have been forwarded to account for the development and maintenance of OCD. The modern psychological treatment of OCD is based on the cognitive-behavioural theory that OCD is maintained by certain dysfunctional beliefs and appraisals. For example, it is held by many researchers in this field, that individuals vulnerable to developing OCD, are perfectionists, overly moralistic, oversensitive to the significance of thoughts, and have unrealistic standards of personal responsibility. In support of the relevance of these beliefs to OCD, much research has shown strong correlations between questionnaire measures of these beliefs and measures of OCD in clinical and non-clinical samples.

To date, there has been little discussion, and even less research on the significance of beliefs about oneself in the development and maintenance of OCD. Two theorists, Guidano and Liotti (1983; Cognitive Processes and Emotional Disorders. New York: Guildford Press) argue that OC symptoms develop in individuals who are insecure or ambivalent about their self-worth. Such individuals are described as having ASE, characterised by uncertainty about self-worth, a tendency to appraise themselves in terms of dichotomous categories (e.g. good and bad), and to be preoccupied with the truth and attainment of self-worth. Obsessions develop because these individuals are overly concerned about the significance of

intrusive thoughts on their self-worth. Compulsions develop as strategies for confirming that one is moral and socially acceptable.

This project examines if there is a relationship between ASE and OC phenomena in clinical and non-clinical samples. It also explores the importance of this relationship in contrast to the relationship between OC phenomena and other vulnerability factors such as perfectionism, responsibility, aspects of the way one relates to others, early experiences, depression, and anxiety. Further, it explores whether ASE is related to OCD only, or whether it may also constitute a vulnerability factor for a range of anxiety conditions such as Panic Disorder, Social phobia, and Generalised Anxiety Disorder. If a relationship between ASE and OC phenomena is found, then this finding may lead to a consideration of the utility of modifying self-concept appraisals in the effort to manage the disorder.

Once again, thank you for your interest in this research. If you have further questions or concerns, please contact one of us.

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Appendix J

Plain Language Statement for Community Controls

Project Title: The significance of self-esteem and beliefs in anxiety conditions

University of Melbourne Ethics Committee clearance number: 990419

I am conducting research on the relationship between self-esteem, beliefs and anxiety disorders. This research is part of my Ph.D in Psychology, at the Department of Psychology, University of Melbourne. It explores whether early childhood experiences and current self-beliefs are related to anxiety, depression and obsessionality. In order to take part in this study, you are invited to complete these 12 questionnaires. They measure self-beliefs, various thinking styles, obsessional behaviours, anxiety, depression, and early relationship experiences. They take about 30 minutes to complete.

In order to be eligible for this study, you must be between 18 and 65 years old and not have (or have had) a psychiatric disorder or substance abuse problem. It is important that you know that participation is strictly voluntary. There is no obligation for you to participate in this project. Your relationship with the researchers will not be affected if you choose not to participate. As some questions may cause discomfort, you may refrain from answering these. However, we encourage you to answer all questions.

All information you provide is anonymous as no identifying information is being collected. In order to keep the responses anonymous, you are not being asked to sign a consent form. However, return of the questionnaires (completed or partially completed) will imply your consent to participate. As the questionnaires are anonymous, it will not be possible for you to withdraw your data once the questionnaires have been submitted. All data will be entered into a statistical database without reference to participants.

All data is treated as strictly confidential, as required by Human Research Ethics Committee, subject to legal requirements and limitations. Access to the data will be limited to the project supervisor (Dr Michael Kyrios) and myself (Mr Sunil Bhar). Questionnaires will be kept under the supervision of Dr. Michael Kyrios, and will be destroyed 5 years after the findings are published.

Should you want to discuss any concern you have about this project, please contact one of us, or the Human Research Ethics Office [c/o Kate Murphy, Executive Officer, Human Research Ethics, Melbourne Research and Innovation Office, The University of Melbourne, Vic 3010, Australia, Telephone: 61 3 8344 7507; Fax 61 3 9347 6737]. If you experience adverse reactions to the questionnaires and wish to talk to a trained counsellor, please contact us. You may also request information about the aims and outcome of this study. Thanks very much for participating in this study.

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Appendix K

Plain Language Statement for OC and AC Samples

Project Title: The significance of self-esteem and beliefs in anxiety conditions
University of Melbourne Ethics Committee clearance number: 990419

This study is being conducted by Mr Sunil Bhar as part of the requirements for the degree of Doctor of Philosophy (Ph.D) in Psychology, at the Department of Psychology, University of Melbourne, under the supervision of Dr Michael Kyrios. The study focuses on the way that individuals see themselves, and explores the relationship between self-perception, beliefs, emotion, anxiety, obsessionality and related experiences.

In order to take part in this study, you are invited to complete questionnaires that measure self-evaluation, thinking styles, obsessional behaviours and mood states, such as anxiety and depression. You are also asked to complete questionnaires on aspects of the way that you relate with others, and early experiences. These questionnaires take approximately 45 to 60 minutes to complete.

In order to be eligible for this study, you must (a) be 18 years or over (b) be able to read and write English, (c) have a capacity to give informed consent, and (d) have a diagnosis of an anxiety disorder or mood disorder. If you agree to participate, we will need to confirm your diagnosis, by administering an hour long structured interview. The interview is designed to provide us with diagnostic information. If you are eligible for this study, we will invite you to complete the questionnaires. Both the interview and questionnaire tasks will be held at the Psychology Clinic, 9th Floor, Charles Connibere building, Royal Melbourne Hospital, Parkville 3050.

All the information you provide is strictly confidential, as required by research ethics committee, subject to legal requirements and limitations. Questionnaires and responses to the interviews will be kept under the supervision of Dr. Michael Kyrios. However, should you wish, the results of the questionnaires can be made available to your treating doctor or therapist for the purpose of your ongoing treatment. All data will be destroyed 5 years after publications related to the findings of the project.

You are free to withdraw from this project at any time. You may request that your information not be included in the project. As some questions may cause discomfort, you are free to refrain from answering questions that you find uncomfortable, although we encourage to answer all items. Your decision to withdraw or limit your participation will not affect your treatment or relationship with the investigators, or therapist.

You will probably see no immediate direct benefit for participating in this project. However, the results of this project are anticipated to lead to improvement in the understanding of anxiety and depressed states, and the treatment of obsessive-compulsive disorder and anxiety disorders. All participants can on request receive a debriefing sheet explaining the aims of this study. You may also ask the researcher to send you a summary of the outcome of this project.

Your participation in this research must be voluntary. You may ask for more information about the study, of if there is any matter that concerns you, do not hesitate to ask one of us. Before deciding to take part you may like to discuss the study with your treating doctor or friends and family members. We are happy to discuss the program with other doctors and treating professionals should you wish it.

Should you wish to discuss any aspect of your participation in this project or any issues it has raised for you, please feel free to contact us at any time about this project. If you wish to talk to a trained therapist about your reactions to the questionnaires, please feel free to discuss this option with us. Thank you for considering participation in this project.

Mr Sunil Bhar,   Dr. Michael Kyrios,
Ph.D. Candidate,   Senior Lecturer,
Department of Psychology,   Department of Psychology,
University of Melbourne   University of Melbourne
Phone: 9344 5572   Phone: 9344 5572

Appendix L

Interview Procedures relating to the Administration of ADIS-IV

Setting up the room before the subject arrives

Ensure that you have booked the group room for your session.

Ensure that you have the video equipment ready to record.

Set up the room with two chairs, not quite facing each other. Remember that <u>you</u> should <u>always</u> closer to the door. This is a safety precaution, in case you need to exit the room. Reserve the chair closest to the door for yourself by placing a pad on the chair.

Photocopy an ADIS-IV. Prepare the questionnaire pack in the reply paid envelopes for your subject to leave with.

Pre-interview procedures

When subjects arrive at the clinic, they make themselves know to reception and wait to be called in. At the appointed time, they are invited into the consulting room and asked to sit.. They then receive the plain language statement, the consent form and the SAM . You may introduce these tasks in the following way:

"Thank you for taking the time to participate. Before I can talk to you, I am required by Ethics to show you information about the study. If you have no concerns or questions about this study, please sign the consent form, and complete the questionnaire. This usually takes 10 minutes. May I get you a coffee, tea…or water? "

Being them a drink, and leave them alone for a while. Leave the room, but walk past every few minutes just to see how they are doing. When you see that they have completed the questionnaire, check their signature, and introduce yourself to them. You may say

"Thank you again for your time in coming here today. Let me start by telling you who I am, and what the study is about. This would allow you to ask questions before we start. I am… studying psychology (etc). We have been researching the relationship between anxiety and beliefs for a few years now. Over this time, we have invited a range of individuals to talk about their experiences with anxiety or depression. In the next 45 minutes I will ask you a range of questions to try and get a sense of your difficulties with anxiety or depression. Some of these questions are open, and very broad, while others are closed, requiring only a yes or no answer or even a number rating. At times I'll be reading from my list of questions, which can make the questions sound quite confusing. Please ask if the question comes across

as unclear. Please know that you can stop the interview at any time. Also, you do not have to answer any question you don't want to. Before we start, do you have any concerns or questions about participating?"

Interview Procedures

Demographics: After addressing their concerns, proceed by asking their demographics (as indicated in ADIS-IV). This serves to warm both of you to the interview. *Note, do not ask them for their address, e-mail or phone number*. We do not need this information at this stage.

The interview: Then proceed with a very broad question such as "What sorts of difficulties are you having with depression or anxiety?" This will get them talking about their difficulties, which would give you some indication about what types of diagnosis are likely. Following their statements, turn to the appropriate page of the ADIS-IV protocol and say, "I'm going to ask you some specific questions about what you've said" and read out the questions as written. Note down their responses as accurately as possible.

Closing: In closing the interview, ask if there was anything you should have asked in order to get a clearer picture of their difficulties. You may ask

"That are all the questions I have to ask you, but was there something else I should know about you in order to get a clearer understanding or your difficulties?"

Finish the interview by offering to send them a summary of the study's findings when they become available next year. If they want this, note down how they would like it sent, and record their address (e-mail or mailing address) on the demographic sheet.

Present questionnaires: Give them the questionnaire pack to take away, and request that they mail it back within a week, just so that their interview and questionnaires are relevant to each other. Please note: All subjects irrespective of their diagnostic state are given a questionnaire pack.

Post-Interview Procedures

It is important that you register your conclusion about their diagnosis by marking the appropriate diagnosis on the diagnosis sheet (see back of ADIS-IV protocol).

Clip the Consent form and SAM to the ADIS-IV- pack and give it to research supervisor during your supervision/training session.

Appendix M

The Self Clarity Scale

For each of the statements below, please indicate your level of agreement or disagreement by circling one of the scale categories to the right of each statement. Use the scale as shown below.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
0	1	2	3	4

1. My beliefs about myself often conflict with one another   0 1 2 3 4

2. On one day I might have one opinion of myself and on another day I might have a different opinion   0 1 2 3 4

3. I spend a lot of time wondering about what kind of person I really am   0 1 2 3 4

4. Sometimes I feel that I am not really the person I appear to be   0 1 2 3 4

5. When I think about the kind of person I have been in the past, I'm not sure what I was really like   0 1 2 3 4

6. I seldom experience conflict between the different aspects of my personality   0 1 2 3 4

7. Sometimes I think I know other people better than I know myself   0 1 2 3 4

8. My beliefs about myself seem to change very frequently   0 1 2 3 4

9. If I were asked to describe my personality, my description might end up being different from one day to another day   0 1 2 3 4

10. Even if I wanted to, I don't think I could tell someone what I'm really like   0 1 2 3 4

11. In general, I have a clear sense of who I am and what I am   0 1 2 3 4

12. It is often hard for me to make up my mind about things because I don't really know what I want   0 1 2 3 4

Appendix N

Splitting Index – Self Scale

Please rate the extent to which you agree with the following statements. Please indicate your answer by circling the appropriate number on the scale beside each statement

Disagree completely	Disagree somewhat	Undecided	Agree Somewhat	Agree Completely
1	2	3	4	5

1. I feel different about myself when I am with different people.   1 2 3 4 5

2. My feelings about myself shift dramatically.   1 2 3 4 5

3. The different parts of my personality are difficult to put together.   1 2 3 4 5

4. Sometimes I am not sure who I am.   1 2 3 4 5

5. My feelings about myself are very powerful, but they can
change from one moment to the next.   1 2 3 4 5

6. My feelings about myself do not change easily.   1 2 3 4 5

7. I sometimes feel "pulled" apart by my feelings about myself .   1 2 3 4 5

8. Who I am depends on how I am feeling.   1 2 3 4 5

Appendix O

Rumination-Reflection Questionnaire

For each of the statements located on the next two pages, please indicate your level of agreement or disagreement by circling one of the scale categories to the right of each statement. Use the scale as shown below.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
0	1	2	3	4

1. My attention is often focussed on aspects of myself I wish I'd stop thinking about   0 1 2 3 4

2. I always seem to be rehashing in my mind recent things I've said or done   0 1 2 3 4

3. Sometimes it is hard for me to shut off thoughts about myself   0 1 2 3 4

4. Long after an argument or disagreement is over with, my thoughts
keep going back to what happened   0 1 2 3 4

5. I tend to "ruminate" or dwell over things that happen to me for a really
long time afterward   0 1 2 3 4

6. I don't waste time rethinking things that are over and done with   0 1 2 3 4

7. Often I'm playing back in my mind how I acted in a past situation   0 1 2 3 4

8. I often find myself re-evaluating something I've done   0 1 2 3 4

9. I never ruminate or dwell on myself for very long   0 1 2 3 4

10. It is easy for me to put unwanted thoughts out of my mind   0 1 2 3 4

11. I often reflect on episodes in my life that I should no longer concern myself with   0 1 2 3 4

12. I spend a great deal of time thinking back over my embarrassing or
disappointing moments   0 1 2 3 4

13. Philosophical or abstract thinking doesn't appeal to me that much   0 1 2 3 4

14. I'm not really a meditative type of person   0 1 2 3 4

15. I love exploring my "inner" self   0 1 2 3 4

16. My attitudes and feelings about things fascinate me   0 1 2 3 4

17. I really don't care for introspective or self-reflective thinking   0 1 2 3 4

18. I love analysing why I do things   0 1 2 3 4

19. People often say I'm a "deep" introspective type of person   0 1 2 3 4

20. I don't care much for self analysis   0 1 2 3 4

21. I'm very self inquisitive by nature   0 1 2 3 4

22. I love to meditate on the nature and meaning of things   0 1 2 3 4

23. I often love to look at my life in philosophical ways   0 1 2 3 4

24. Contemplating myself isn't my idea of fun   0 1 2 3 4

Appendix P

Rosenberg's Stability of Self Scale - Amended (New York Version)

To what extent do you agree with the following statements? Please circle the appropriate number beside each statement.

Not at all	A little	Moderately	A lot
0	1	2	3

1. My opinion of myself changes a good deal   0 1 2 3

2. I have one opinion about myself one day, and another opinion on another day 0 1 2 3

3. I have noticed that my ideas about myself seem to change very quickly 0 1 2 3

4. Some days I have a good opinion about myself, other days I have a very poor
opinion of myself   0 1 2 3

5. I feel that nothing, or almost nothing can change the opinion I currently hold of
myself   0 1 2 3

Appendix Q

Rosenberg Self-Esteem Scale

Please rate the extent to which you agree with each of the following statements. Respond by circling the appropriate number on the scale beside each statement.

1	2	3	4	5	6	7	8	9
Definitely disagree	Strongly disagree	Disagree	Disagree a little	Unsure	Agree a little	Agree	Strongly agree	Definitely agree

1. I feel I have a number of good qualities   1 2 3 4 5 6 7 8 9

2. I wish I could have more respect for myself   1 2 3 4 5 6 7 8 9

3. I feel I am a person of worth   1 2 3 4 5 6 7 8 9

4. I feel I do not have much to be proud of   1 2 3 4 5 6 7 8 9

5. I take a positive attitude towards myself   1 2 3 4 5 6 7 8 9

6. I certainly feel useless at times   1 2 3 4 5 6 7 8 9

7. All in all, I am inclined to think that I am a failure   1 2 3 4 5 6 7 8 9

8. I am unable to do things as well as most other people   1 2 3 4 5 6 7 8 9

9. At times I think I am no good at all   1 2 3 4 5 6 7 8 9

10. On the whole I am satisfied with myself   1 2 3 4 5 6 7 8 9

Appendix R

The Early Developmental Influences Inventory

The following section will ask you about features of your early childhood and family life. Using the scale below, rate how accurately the statements describe your experiences.

Not at all accurate	Somewhat accurate	Quite accurate	Very accurate	Completely accurate
1	2	3	4	5

*Ambivalent parenting and attachment scales only

Ambivalent Parenting Scale (demanding-overindulgent)

My early childhood featured:

A2	constant criticism	1 2 3 4 5
A5	a lot of physical abuse	1 2 3 4 5
A6	demands to keep my emotions under control	1 2 3 4 5
A25	too much discipline	1 2 3 4 5
A26	over-involvement by my family	1 2 3 4 5
A27	constant demands to be rational	1 2 3 4 5
A37	immediately having whatever I wanted	1 2 3 4 5

Ambivalent Attachment Scale

B10	I have always been "hot and cold" with other people	1 2 3 4 5
B12	I have never been able to work out people's reactions to me	1 2 3 4 5
B29	I've not been sure how others feel about me	1 2 3 4 5
B37	I have generally varied in how I react to others	1 2 3 4 5
B44	Other people have generally always confused me	1 2 3 4 5

Appendix S

Frost Indecisiveness Scale

Please indicate the extent to which you agree with the following statements. Circle the number that best describes your level of agreement with each of the statements below.

Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
1	2	3	4	5

1. I try to put off making decisions   1 2 3 4 5

2. I always know exactly what I want   1 2 3 4 5

3. I find it easy to make decisions   1 2 3 4 5

4. I have a hard time planning my free time   1 2 3 4 5

5. I like to be in a position to make decisions   1 2 3 4 5

6. Once I make a decision, I feel fairly confident that it is a good one   1 2 3 4 5

7. When ordering from a menu, I usually find it difficult to decide
what to get   1 2 3 4 5

8. I usually make decisions quickly   1 2 3 4 5

9. Once I make a decision, I stop worrying about it   1 2 3 4 5

10. I become anxious when making a decision   1 2 3 4 5

11. I often worry about making the wrong decision   1 2 3 4 5

12. After I have chosen of decided something, I often
believe I've made the wrong choice or decision   1 2 3 4 5

13. I do not get assignments done on time because I can
not decide what to do first   1 2 3 4 5

14. I have trouble completing assignments because I can't
prioritise what is more important   1 2 3 4 5

15. It seems that deciding on the most trivial thing takes
me a long time   1 2 3 4 5

Appendix T

Personality Diagnostic Questionnaire-IV

*Obsessive Compulsive, Narcissism and Borderline Scales only

The following statements describe thoughts, experiences and feelings that you may have experienced over the past several years. Please circle **either TRUE or FALSE** for each statement. Even if you are not entirely sure about the answer, please choose the one closest to the truth.

1. I have accomplished far more than others give me credit for   TRUE   FALSE

2. I often get lost in details and lose sight of the "big picture"   TRUE   FALSE

3. I often find myself thinking about how great a person I am, or will be   TRUE   FALSE

4. I waste time trying to make things too perfect   TRUE   FALSE

5. Only certain special people can really appreciate and understand me   TRUE   FALSE

6. I put my work ahead of being with my family or friends or having fun   TRUE   FALSE

7. I need very much for other people to take notice of me or compliment me   TRUE   FALSE

8. I have a higher sense of morality than other people   TRUE   FALSE

9. I expect other people to do favours for me even though I do not usually do favours for them   TRUE   FALSE

10. I have accumulated lots of things I don't need that I can't bear to throw out   TRUE   FALSE

11. Some people think I take advantage of others   TRUE   FALSE

12. If others can't do things correctly I would prefer to do them myself   TRUE   FALSE

13. People have often complained that I did not realise that they were upset   TRUE   FALSE

14. I see myself as thrifty but others see me as cheap   TRUE   FALSE

15. Some people are jealous of me   TRUE   FALSE

16. People complain that I'm "stubborn as a mule"   TRUE   FALSE

17. Others consider me to be stuck up   TRUE   FALSE

18. I'll go to extremes to prevent those who I love from ever leaving me   TRUE   FALSE

19. I either love someone or hate them with nothing in between   TRUE   FALSE

20. I often wonder who I really am   TRUE   FALSE

21. I have tried to hurt or kill myself   TRUE   FALSE

22. I am a very moody person   TRUE   FALSE

23. I have difficulty controlling my anger   TRUE   FALSE

24. When stressed, things happen. Like I get paranoid or just "black out"   TRUE   FALSE

25. I have done things on impulse (*such as those below*) that can get me into trouble   TRUE   FALSE

Check all that apply to you:

Spending more money than I have _____

Having sex with people I hardly know ____

Drinking too much ____

Taking drugs ____

Eating binges ____

Reckless driving ____

Appendix U

Personal Style Inventory (Sociotropy Scale)

Here are a number of statements about personal characteristics. Please read each one carefully, and indicate whether you agree or disagree, and to what extent, by circling a number

Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6

1. I often put other people's needs before my own   1 2 3 4 5 6

2. I find it difficult to be separated from people I love   1 2 3 4 5 6

3. I am very sensitive to the effects I have on the feelings of other people   1 2 3 4 5 6

4. I am very sensitive to criticism by others   1 2 3 4 5 6

5. I worry a lot about hurting or offending other people   1 2 3 4 5 6

6. It is hard for me to break off a relationship even if it is making me unhappy   1 2 3 4 5 6

7. I am easily persuaded by others   1 2 3 4 5 6

8. I try to please other people too much   1 2 3 4 5 6

9. I find it difficult to be alone all day   1 2 3 4 5 6

10. I often feel responsible for solving other people's problems   1 2 3 4 5 6

11. It is hard for me to get over the feeling of loss when a relationship has ended   1 2 3 4 5 6

12. It is very important to me to be liked or admired by others   1 2 3 4 5 6

13. I feel I have to be nice to other people   1 2 3 4 5 6

14. I like to be certain that there is somebody close I can contact in case something
unpleasant happens to me   1 2 3 4 5 6

15. I am too apologetic to other people   1 2 3 4 5 6

16. I am very concerned with how people react to me   1 2 3 4 5 6

17. I get very uncomfortable when I'm not sure whether or not someone likes me   1 2 3 4 5 6

18. It is hard for me to say "no" to other people's requests   1 2 3 4 5 6

19. I become upset when something happens to me and there's nobody around to
talk to   1 2 3 4 5 6

20. I am most comfortable when I know I know my behaviour is what others
expect of me   1 2 3 4 5 6

21. I often let people take advantage of me   1 2 3 4 5 6

22. I become upset when a friend breaks a date or forgets to call me as planned   1 2 3 4 5 6

23. I judge myself based on how I think others feel about me   1 2 3 4 5 6

24. It is hard for me to let people know when I am angry with them   1 2 3 4 5 6

Appendix V

Beck Depression Inventory-II

The BDI-II is a copyrighted instrument published by the Psychological Corporation. It cannot be reproduced in this thesis. For a copy of the BDI-II, contact:

The Psychological Corporation (Harcourt Australia)
Locked Bag 16, St Peters
NSW 2044, Australia.
Ph. (+61) 02 9517 8958
Fx. (+61) 02 9517 2249
Email: tpc@harcourt.com.au

Appendix W

Guilt Inventory - Moral Standards Subscale

Please indicate the extent to which you agree with the statements below. Using the scale below, circle the appropriate number beside each statement.

_____

1 = Very true of me or Strongly agree

2 = True of me or Agree

3 = Sometimes true, sometimes not, or Undecided

4 = Not true of me or Disagree

5 = Very untrue of me or Strongly disagree

_____

1. I believe in a strict interpretation of right and wrong	1 2 3 4 5
2. I have always believed strongly in a firm set of moral-ethical principles	1 2 3 4 5
3. My goal in life is to enjoy it rather than to live up to some abstract set of moral principles	1 2 3 4 5
4. There are only a few things I would never do	1 2 3 4 5
5. My ideas of right and wrong are quite flexible	1 2 3 4 5
6. There are many things I would never do because I believe they are wrong	1 2 3 4 5
7. Morality is not as black and white as many people would suggest	1 2 3 4 5
8. In certain circumstances there is almost nothing I wouldn't do	1 2 3 4 5
9. I would rather die than commit a serious act of wrong doing	1 2 3 4 5
10. I feel a strong need to live up to my moral values	1 2 3 4 5
11. I believe that you can't judge whether something is right or wrong without knowing the motives of the people involved and the situation in which they are acting	1 2 3 4 5
12. I never worry about what I do; I believe life will take care of itself	1 2 3 4 5

13. I am immediately aware of it when I have done something morally wrong   1 2 3 4 5

14. What is right or wrong depends on the situation   1 2 3 4 5

15. I believe that moral values are absolute   1 2 3 4 5

Appendix X

Cattell's Salient Similarity Index

Steps in Calculating and Testing s

Step 1: Construct a 2 way frequency table

Step 2: Calculate $S = [c_{11} + c_{33} - c_{13} - c_{31}] / [c_{11} + c_{33} + c_{13} + c_{31} + 0.5(c_{12} + c_{21} + c_{23} + c_{32})]$

Step 3: Compare s to v; Probabilities are assessed considering both the number of variables (p) and the percentage of cases that fall into the hyperplane for the pair of factors being compared. If the value of s exceeds v, for some hyperplane percentage and number of variables, then the factors are reliably similar.

Step 3a: Count number of variables

Step 3b: Hyperplane percentage

Step 3c: Consult table on probabilities for the salient similarity index, s (Tabachnick & Fidell, XX, p. 717)

Step 3d: Compare s to v

Step 3e: If s > v, the factors are reliably similar

Analysis 1: Student Controls (SC) vs Obsessive Compulsive Group (OC)

Step 1:

		OC		
		PS	HP	NS
SC	PS	19 (c_{11})	0 (c_{12})	0 (c_{13})
	HP	0 (c_{21})	2 (c_{22})	0 (c_{23})
	NS	0 (c_{31})	0 (c_{32})	0 (c_{33})

Step 2:

$S \quad = [c_{11} + c_{33} - c_{13} - c_{31}] / [c_{11} + c_{33} + c_{13} + c_{31} + 0.5(c_{12} + c_{21} + c_{23} + c_{32})]$

$S_{SS, OC} \quad = [19 + 0 - 0 - 0] / [19 + 0 + 0 + 0 + 0.5(0 + 0 + 0 + 0)]$

$\quad = 19/[19 + 0]$

$\quad = 19/19$

$\quad = 1.00$

Step 3:

3a: Number of variables   =   21

3b: Hyperplane percentage=   2/21   =   9.52%

3c: v   =   < .63

3d: Compare s to v: s > v

3e: Conclusion: Factors are reliably similar.

Analysis 2: Student Controls (SC) vs Anxiety Control Group (AC)

Step 1:

		AC		
		PS	HP	NS
(SC)	PS	17 (c_{11})	2 (c_{12})	0 (c_{13})
	HP	2 (c_{21})	0 (c_{22})	0 (c_{23})
	NS	0 (c_{31})	0 (c_{32})	0 (c_{33})

Step 2:

S $= [c_{11} + c_{33} - c_{13} - c_{31}] / [c_{11} + c_{33} + c_{13} + c_{31} + 0.5(c_{12} + c_{21} + c_{23} + c_{32})]$

$S_{SS, OC}$ $= [17 + 0 - {}_0 - 0] / 17 + 0 + 0 + 0 + 0.5(2 + 2 + 0 + 0)$

            $= [17/[17 + 2]$

            $= 17/19$

            $= 0.89$

Step 3

3a: Number of variables   =   21

3b: Hyperplane percentage=   0/21   =   0%

3c: v   =   < .63

3d: Compare s to v   :   s > v

3e: Conclusion   :   Factors are reliably similar.

Analysis 3: Student Controls (SC) vs. Community Controls (CC)

Step 1:

		CC		
		PS	HP	NS
SC	PS	17 (c_{11})	2 (c_{12})	0 (c_{13})
	HP	1 (c_{21})	1 (c_{22})	0 (c_{23})
	NS	0 (c_{31})	0 (c_{32})	0 (c_{33})

Step 2:

S $= [c_{11} + c_{33} - c_{13} - c_{31}] / [c_{11} + c_{33} + c_{13} + c_{31} + 0.5(c_{12} + c_{21} + c_{23} + c_{32})]$

$S_{SS, OC}$ $= [17 + 0 - 0 - 0] / [17 + 0 + 0 + 0 + 0.5(2 + 1 + 0 + 0)]$

            $= 17/[17 + 1.5]$

$= 17/18.5$

$= 0.92$

Step 3:

3a: Number of variables = 21

3b: Hyperplane percentage= 1/21 = 4.76%

3c: v = < .63

3d: Compare s to v: s > v

3e: Conclusion: Factors are reliably similar.

Appendix Y

The Self-Ambivalence Measure

Please rate the **extent to which you agree** with the following statements. Indicate your answer by circling the appropriate number on the scale beside each statement.

Not at all	Agree a little	Agree moderately	Agree a lot	Agree totally
0	1	2	3	4

1. I doubt whether others really like me   0 1 2 3 4

2. I am mindful about how I come across to others   0 1 2 3 4

3. I feel torn between different parts of my personality   0 1 2 3 4

4. I fear that I am capable of doing something terrible   0 1 2 3 4

5. I think about my worth as a person   0 1 2 3 4

6. I am constantly aware of how others perceive me   0 1 2 3 4

7. I feel that I am full of contradictions   0 1 2 3 4

8. I question the extent to which others want to be close to me   0 1 2 3 4

9. I tend to think of myself in terms of categories such as "good" or "bad"   0 1 2 3 4

10. I have mixed feelings about my self-worth   0 1 2 3 4

11. I question whether I am a moral person   0 1 2 3 4

12. I question whether I am morally a good or bad person   0 1 2 3 4

13. If I inadvertently allow harm to come to others, this proves I am untrustworthy   0 1 2 3 4

14. I tend to move from one extreme to the other in how I think of myself   0 1 2 3 4

15. I think about how I can improve my self   0 1 2 3 4

16. I am constantly concerned about whether I am a "decent" human being   0 1 2 3 4

17. I am constantly worried about whether I am a good or bad person   0 1 2 3 4

18. When I am with others, I think about whether I look my best   0 1 2 3 4

19. I constantly worry about whether I will make anything of my life   0 1 2 3 4

Appendix Z

Confidence intervals for Cronbach's alpha coefficient

Key

ξ	=	Population value of Cronbach's alpha
ξ'	=	Sample alpha coefficient
ξ_L	=	Cronbach's alpha lower limit
ξ_U	=	Cronbach's alpha upper limit
N	=	Number of persons in the sample
n	=	Number of items in the scale
α	=	Alpha level
DF	=	Degrees of Freedom

Formula for Confidence Interval

$$\xi_L < \xi < \xi_U$$

where

$$\xi_L = 1 - [1 - \xi') F_{(1 - \alpha/2)}$$

and

$$\xi_U = 1 - [1 - \xi') F_{(\alpha/2)}$$

and

$$df_1 = N - 1$$

and

$$df_2 = (n - 1)(N - 1)$$

Calculations for 95% Confidence Intervals

Sample	n	N	df_1	df_2	$F_{(.975)}$ *	$F_{(.025)}$ *	ξ'	ξ_L	ξ_U
SC	19	197	196	3510	1.21	0.81	.91	.89	.93
OC	19	55	54	972	1.43	0.65	.92	.89	.93
AC	19	45	44	792	1.48	0.66	.93	.90	.95
CC	19	45	44	792	1.48	0.66	.86	.79	.91

Appendix AA

Testing the Difference Between Independent rs

Correlations are independent when correlations come from different data sets (Howell, 1997, p. 259). The test of whether two independent correlations are significantly different,, is provided by Howell (1997). The test statistics is the z score, which is computed using Fisher's (1921) solution

Step 1

Transform r to r', in order to normalise the sampling distribution of r. Appendix r' (Howell, 1997, p. 682) tabulates the values of r' for the different values of r.

Step 2

Calculate *z*, as follows

$$z = \frac{r'_1 - r'_2}{\sqrt{[1/(N_1 - 3) + 1/(N_2 - 3)]}}$$

Step 3

Test the null hypothesis that $\rho_1 = \rho_2$, by comparing *z* to $z_{.025} = \pm 1.96$; If $z > z_{.025}$, reject the null hypothesis.

Calculations

		N_1	r_1	N_2	r_2	r'_1	r'_2	$r'_1 - r'_2$	$N_1 - 3$	$N_2 - 3$	z
R	IOT	260	.698	245	.475	.867	.517	.350	257	242	3.89**
P	R	261	.704	246	.484	.877	.530	.347	258	243	3.90**
IOT	P	260	.687	245	.440	.848	.472	.376	257	242	4.22**

Note. $r'_1 =$ zero order correlations; $r'_2 =$ partial correlations, controlling for SAM; r' = transformed correlations, using Fisher's (1921) solution (see Howell, 1997, p. 682). *z* = *z* statistic; N = number of subjects in each data set.
All rs are significant at .000; ** p < .01

Appendix BB

The Padua Inventory-Revised

<u>Instructions</u>: 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:

Not at all	A little	Quite a lot	A lot	Very much
0	1	2	3	4

1. I feel my hands are dirty when I touch money — 0 1 2 3 4

2. I think even slight contact with bodily secretions (perspiration, saliva, urine, etc.) may contaminate my clothes or somehow harm me — 0 1 2 3 4

3. I find it difficult to touch an object when I know it has been touched by certain people — 0 1 2 3 4

4. I find it difficult to touch garbage or dirty things — 0 1 2 3 4

5. I avoid using public toilets because I am afraid of disease or contamination — 0 1 2 3 4

6. I avoid using public telephones because I am afraid of contagion and disease — 0 1 2 3 4

7. I wash my hands more often and longer than necessary — 0 1 2 3 4

8. I sometimes have to wash or clean myself simply because I think I may be dirty or contaminated — 0 1 2 3 4

9. If I touch something I think it is "contaminated", I immediately have to wash or clean myself — 0 1 2 3 4

10. If an animal touches me, I feel dirty and immediately have to wash myself or change my clothing — 0 1 2 3 4

14. I feel obligated to follow a particular order in dressing, undressing, and/or washing — 0 1 2 3 4

15. Before going to sleep, I have to do certain things in a certain order   0 1 2 3 4

16. Before going to bed, I have to hang up or fold my clothes in a special way   0 1 2 3 4

18. I have to do things several times before I think they are properly done   0 1 2 3 4

19. I tend to keep on checking things more often than necessary   0 1 2 3 4

20. I check and recheck gas and water taps, and light switches after turning
them off   0 1 2 3 4

21. I return home to check doors, windows, drawers etc., to make sure they
are properly shut   0 1 2 3 4

22. I keep on checking forms, documents, cheques etc., to make sure I have
filled them in correctly   0 1 2 3 4

23. I keep on going back to see that matches, cigarettes etc., are properly
extinguished   0 1 2 3 4

24. When I handle money, I count and recount it several times   0 1 2 3 4

25. I check letters carefully many times before posting them   0 1 2 3 4

27. Sometimes, I am not sure I have done things, which in fact I know
 I have done   0 1 2 3 4

36. I imagine catastrophic consequences as a result of absent-mindedness
or minor errors I make   0 1 2 3 4

37. I think or worry at length about having hurt someone without knowing it   0 1 2 3 4

38. When I hear about a disaster, I think it is somehow my fault   0 1 2 3 4

39. I sometimes worry at length for no reason that I have hurt myself of
have some disease   0 1 2 3 4

42. When I read, I have the impression I have missed something important

and must go back and re-read the passage at least two or three times   0 1 2 3 4

46. When I look down from a bridge or a very high window, I feel an impulse
to throw myself into space   0 1 2 3 4

47. When I see a train approaching, I sometimes think I could throw myself
 under its wheels   0 1 2 3 4

48. At certain moments I am tempted to tear off my clothes in public   0 1 2 3 4

49. While driving, I sometimes feel an impulse to drive my car into someone
 or something   0 1 2 3 4

50. Seeing weapons excites me and makes me think violent thoughts   0 1 2 3 4

51. I get upset and worried at the sight of knives, daggers and other pointed objects   0 1 2 3 4

53. I sometimes feel the need to break or damage things for no reason   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   0 1 2 3 4

55. I am sometimes almost irresistibly tempted to steal something from the supermarket 0 1 2 3 4

56. I sometimes have an impulse to hurt defenceless children or animals   0 1 2 3 4

59. When I hear about a suicide or crime, I am upset for a long time, and find it
difficult to stop thinking about it   0 1 2 3 4

60. I invent useless worries about germs and diseases   0 1 2 3 4

Appendix CC

Yale-Brown Obsessive-Compulsive Scale

Recent research has shown that obsessions and compulsions occur quite commonly among normal people. While completing the inventories below, please keep in mind our definitions of obsessions and compulsions.

OBSESSIONS are unwelcome and distressing ideas, thoughts, or impulses that repeatedly enter your mind. They may seem to occur against your will. They may be repugnant to you, you may recognize them as senseless, and they may not fit your personality.

Examples of an obsession are the recurrent thought or impulse to do serious harm to your children even though you never would and the idea that house hold cleansers may lead to contamination and serious illness.

Obsessions differ from worries in that worries are about possible negative things related to life problems that you are afraid might happen. For example, you may worry about failing an exam, about finances, health, or personal relationships. In contrast to obsessions, your worries don't usually seem totally senseless, repugnant, or inconsistent with your personality.

COMPULSIONS, on the other hand, are behaviours or acts that you feel driven to perform although you may recognize them as senseless or excessive. Usually compulsions are performed in response to an obsession, or according to certain rules or in a stereotype fashion. At times, you may try to resist doing them but this may prove difficult. You may experience discomfort that does not diminish until the behaviour is completed.

Examples of a compulsion are the need to repeatedly check appliances, water faucets, and the lock on the front door before you can leave the house and repeated hand washing. While most compulsions are observable behaviours, some are unobservable mental acts, such as silent checking or having to recite nonsense phrases to yourself each time you have a bad thought.

Compulsions, as we define them here, are not to be confused with other kinds of compulsive behaviour such as overeating, gambling, drinking alcohol, overshopping, or other "addictive behaviours".

Given the above definitions, please read carefully each item on the checklist below and place a check mark beside each obsession and compulsion that you currently experience and that you have experienced at some time in the past. If you place a check mark beside obsessions or compulsions that you currently experience: (2) circle the 2 most upsetting obsessions that you currently experience: and (3) circle the 2 most upsetting compulsions that you currently engage in.

YALE BROWN OBSESSIVE-COMPULSIVE SCALE SYMPTOM CHECKLIST
(GOODMAN, RASMUSSEN, ET AL.)

OBSESSIONS

Past	Current			Examples

Aggressive Obsessions

		1.	I fear I might harm myself.	Fear of eating with a knife or fork, fear of handling sharp objects, fear of walking near glass windows.
		2.	I fear I might harm other people	Fear of poisoning other people's food, fear of harming babies, fear of pushing someone in front of a train, fear of hurting someone's feelings, fear of being responsible by not providing assistance for some imagined catastrophe, fear of causing harm by giving bad advice.
		3.	I have violent or horrific images in my mind.	Images of murders, dismembered bodies, or other disgusting scenes.
		4.	I fear I will blurt out obscenities in class	Fear of shouting obscenities in public situations like church, fear of writing obscenities.
		5.	I fear doing something else embarrassing.	Fear of appearing foolish in social situations.
		6.	I fear I will act on an unwanted impulse	Fear of driving a car into a tree, fear of running someone over, fear of stabbing a friend.
		7.	I fear I will steal things.	Fear of "cheating" a cashier, fear of shoplifting inexpensive items.
		8.	I fear that I'll harm others because I'm not careful enough.	Fear of causing an accident without being aware of it (such as a hit-and-run automobile accident).
		9.	I fear I'll be responsible for something else terrible happening	Fear of causing a fire or burglary because of not being careful enough in checking the house before leaving.

Contamination Obsessions

| | | 10. | I am concerned or disgusted with bodily waste or secretions | Fear of contracting AIDS, cancer, or other diseases from public rest rooms; fears of your own saliva, urine, faeces, semen, or vaginal secretions. |
| | | 11. | I am concerned with dirt or germs. | Fear of picking up germs from sitting in certain chairs, shaking hands, or touching door handles. |

Past	Current			Examples
_____	_____	12.	I am excessively concerned with environmental contaminants	Fear of being contaminated by asbestos or radon, fear of radioactive substances, fear of things associated with towns containing toxic waste sights.
_____	_____	13.	I am excessively concerned with certain household cleansers.	Fear of poisonous kitchen or bathroom cleansers, solvents, insect spray or turpentine.
_____	_____	14.	I am excessively concerned with animals.	Fear of being contaminated by touching an insect, dog, cat, or other animal.
_____	_____	15.	I am bothered by sticky substances or residues.	Fear of adhesive tape or other sticky substances that may trap contaminants.
_____	_____	16.	I am concerned that I will get ill because of contamination.	Fear of getting ill as a direct result of being contaminated (beliefs vary about how long the disease will take to appear).
_____	_____	17.	I am concerned that I will contaminate others.	Fear of touching other people or preparing their food after you touch poisonous substances (like gasoline) or after you touch your own body.

Sexual Obsessions

Past	Current			Examples
_____	_____	18.	I have forbidden or perverse sexual thoughts, images, or impulses.	Unwanted sexual thoughts about strangers, family, or friends.
_____	_____	19.	I have sexual obsessions that involve children or incest.	Unwanted thoughts about sexually molesting either your own children or other children.
_____	_____	20.	I have obsessions about homosexuality.	Worries like "Am I a homosexual?" or "What if I suddenly become gay?" when there is no basis for these thoughts.
_____	_____	21.	I have obsessions about aggressive sexual behaviour toward other people.	Unwanted images of violent sexual behaviour toward adult strangers, friends or family members.

Hoarding/Saving Obsessions

Past	Current			Examples
_____	_____	22.	I have obsessions about hoarding or saving things.	Worries about throwing away seemingly unimportant things that you might need in the future, urges to pick up and collect useless things.

Religious Obsessions

Past	Current			Examples
_____	_____	23.	I concerned with sacrilege and blasphemy.	Worries about having blasphemous thoughts, saying blasphemous things, or being punished for such things.

Past	Current			Examples
_____	_____	24.	I am excessively concerned with morality.	Worries about always doing "the right thing," having told a lie, or having cheated someone.

Obsession with the Need for Symmetry or Exactness

_____	_____	25.	I have obsessions about symmetry or exactness.	Worries about papers and books being properly aligned, worries about calculations or handwriting being perfect.

Miscellaneous Obsessions

_____	_____	26.	I feel that I need to know or remember things.	Belief that you need to remember insignificant things like license plate numbers, the names of actors on television shows, old telephone numbers, bumper sticker or t-shirt slogans.
_____	_____	27.	I fear saying certain things.	Fear of saying certain words (such as "thirteen) because of superstitions, fear of saying something that might be disrespectful to a dead person, fear of using words with an apostrophe (because this denotes possession).
_____	_____	28.	I fear not saying just the right thing.	Fear of having said the wrong thing, fear of not using the "perfect" word.
_____	_____	29.	I fear losing things.	Worries about losing a wallet or other important objects, like a scrap of note paper.
_____	_____	30.	I am bothered by intrusive (Neutral) mental images.	Random, unwanted images in your mind.
_____	_____	31.	I am bothered by intrusive mental nonsense sounds, words or music.	Words, songs, or music in your mind that you can't stop.
_____	_____	32.	I am bothered by certain sounds or noises.	Worries about the sounds of clocks ticking loud loudly or voices in another room that may interfere with sleeping.
_____	_____	33.	I have lucky and unlucky numbers.	Worries about common numbers (like thirteen) that may cause you to perform activities a certain number of times or to postpone an action until a certain lucky hour of the day.
_____	_____	34.	Certain colours have special significance.	Fear of using objects of certain colours (e.g. black may be associated with death, red with blood and injury).
_____	_____	35.	I have superstitious fears.	Fear of passing a cemetery, hearse, or black cat; fear of omens associated with death.

Past	Current			Examples

Somatic Obsessions

_____   _____   36.   I am concerned with illness or disease.

Worries that you have an illness like cancer, heart disease or AIDS, despite reassurance from doctors that you do not.

_____   _____   37.   I am excessively concerned with a part of my body or an aspect of my appearance (dysmorphophobia)

Worries that your face, ears, nose, eyes, or another part of your body is hideous, ugly, despite reassurances to the contrary.

COMPULSIONS

_____   _____   38.   I wash my hands excessively or in a ritualised way.

Washing your hands many times a day or for periods of time after touching, or thinking that you have touched a contaminated object. This may include washing the entire length of your arms.

_____   _____   39.   I have excessive or ritualised showering, bathing, tooth brushing, grooming or toilet routines.

Taking showers or baths or performing other bathroom routines that may last for several hours. If the sequence is interrupted, the entire process may have to be restarted.

_____   _____   40.   I have compulsions that involve cleaning household items or other inanimate objects.

Excessive cleaning of faucets, toilets, floors, kitchen counters, or kitchen utensils.

_____   _____   41.   I do other things to prevent or remove contact with contaminants.

Asking family members to handle or remove Insecticides, garbage, gasoline cans, raw meat, paints, varnish, drugs in the medicine cabinet, or kitty litter. If you can't avoid these things, you may wear gloves to handle them, such as when using a self-service gasoline pump.

Checking Compulsions

_____   _____   42.   I check that I did not harm others.

Checking that you haven't hurt someone without knowing it. You may ask others for reassurance or telephone to make sure that everything is all right.

_____   _____   43.   I check that I did not harm myself.

Looking for injuries of bleeding after handling sharp or breakable objects. You may frequently go to doctors to ask for reassurance that you haven't hurt yourself.

_____   _____   44.   I check that nothing terrible happened.

Searching the newspaper or listening to the radio or television for news about some catastrophe that you believe you caused. You may also ask people for reassurance that you didn't cause an accident.

<u>Past</u>	<u>Current</u>			<u>Examples</u>
_____	_____	45.	I check that I did not make a mistake.	Repeated checking of door locks, stoves, electrical outlets, before leaving home; repeated checking while reading, writing, or doing simple calculations to make sure that you didn't make a mistake you can't be certain that you didn't.
_____	_____	46.	I check some aspect of my physical condition tied to my obsessions about my body.	Seeking reassurance from friends or doctors that you aren't having a heart attack or getting cancer; repeatedly taking your pulse, blood pressure, or temperature; checking yourself for body odours, checking your appearance in a mirror, looking for ugly features.

Repeating Rituals

_____	_____	47.	I reread or rewrite things.	Taking hours to read a few pages in a book or to write a short letter because you get caught in a cycle of reading and rereading; worrying that you didn't understand something you just read; searching for a "perfect" word or phrase; having obsessive thoughts about the shape of certain printed letters in a books.
_____	_____	48.	I need to repeat routing activities.	Repeating activities like turning appliances on and off, combing you hair, going in and out of a doorway, or looking in a particular direction; not feeling comfortable unless you do these things the "right" number of times.

Counting Compulsions

_____	_____	49.	I have counting compulsions.	Counting objects like ceiling or floor tiles, books in a bookcase, nails in a wall, or even grains of sand on a beach; counting when you repeat certain activities, like washing.

Ordering/Arranging Compulsions

_____	_____	50.	I have ordering or arranging compulsions.	Straightening paper and pens on a desktop or books in a bookcase, wasting hours arranging things in your house in "order" and then becoming very upset if this order is disturbed.

Hoarding/Collecting Compulsions

_____	_____	51.	I have compulsions to hoard or collect things.	Saving old newspapers, notes, cans, paper towels, wrappers, and empty bottles for fear that if you throw them away you may one day need them; picking up useless objects from the street or from garbage

Past	Current			Examples
				cans.

Miscellaneous Compulsions

Past	Current			Examples
_____	_____	52.	I have mental rituals (other than checking/counting).	Performing rituals in your head, like saying payers or thinking a "good" thought to undo a "bad" thought. These are different from obsessions, because you perform them intentionally to reduce anxiety or feel better.
_____	_____	53.	I need to tell, ask, or confess things.	Asking other people to reassure you, confessing to wrong behaviours you never even did, believing that you have to tell other people certain words to feel better.
_____	_____	54.	I need to touch, tap, or rub things.	Giving in to the urge to touch rough surfaces, like wood, or hot surfaces, like a stove top; giving in to the urge to lightly touch other people; believing you need to touch an object like a telephone to prevent an illness in your family.
_____	_____	55.	I take measures (other than checking) to prevent harm or terrible consequences to myself or others.	Staying away from sharp or breakable objects, such as knives, scissors, and fragile glass.
_____	_____	56.	I have ritualised eating behaviours.	Arranging your food, knife, and fork in an particular order before being able to eat, eating according to a strict ritual, not being able to eat until the hands of a clock point exactly at a certain time.
_____	_____	57.	I have superstitious behaviours.	Not taking a bus or train if its number contains an "unlucky" number (like thirteen), staying in your house on the thirteenth of the month, throwing away clothes you wore while passing a funeral home or cemetery.
_____	_____	58.	I pull my hair out (trichotillomania)	Pulling hair from you scalp, eyelids, eyelashes, or pubic areas, using your fingers or tweezers. You may produce bald spots that require you to wear a wig, or you may pluck your eyebrows or eyelids smooth.

YBOCS Scale Instructions

Thank you for completing the Y-BOCS checklist. Please make sure you circled the 2 most upsetting obsessions that you currently experience and that you circled the 2 compulsions that cause you the most difficulty.

Next, please turn to the next page and complete the Yale-Brown Obsessive Compulsive Scale (Y-BOCS). Remember the definitions of obsessions and compulsions and the examples of each that you may have noted on the checklist. Please place a check mark by the appropriate number from 0 to 4 under each question.

If you are currently <u>not</u> experiencing any obsessions or compulsions, you do not need to complete the scale on the next page. However, please fill out the information below and then wait for your instructor to ask for your questionnaire. Thank you very much for your help!

YALE-BROWN OBSESSIVE COMPULSIVE SCALE (Y-BOCS)

OBSESSIVE THOUGHTS

Review the obsessions you checked on the Y-BOCS Symptom Checklist to help you answer the first five questions. Please think about the last seven days (including today), and check one answer for each question.

1. How much of your time was occupied by obsessive thoughts? How frequently do the obsessive thought occur?

   0 =   None – If you checked this answer, also check for questions 2, 3, 4 and 5 and proceed question 6.
   1 =   Less than 1 hour per day, or occasional intrusions (occur no more than 8 times a day).
   2 =   1 to 3 hours per day, or frequent intrusions (occur more than 8 times a day, but most hours of the day are free of obsessions.
   3 =   More than 3 hours and up to 8 hours per day, or very frequent intrusions (occur more than 8 times a day and during most hours of the day).
   4 =   More than 8 hours per day, or near-constant intrusions (too numerous to count, and an hour rarely passes without several obsessions occurring).

2. How much did your obsessive thoughts interfere with your social or work functioning? (If you are currently not working, please think about how much the obsessions interfered with your everyday activities.) (In answering this question, please consider whether there was anything that you didn't do, or that you did less, because of the obsessions.)

   0 =   No interference.
   1 =   Mild, slight interference with social or occupational performance, but still performance not impaired.
   2 =   moderate, definitive interference with social or occupational performance, but still manageable.
   3 =   Severe interference, causes substantial impairment in social or occupational performance.
   4 =   Extreme, incapacitating interference.

3. How much distress do your obsessive thoughts cause you?

   0 =   None.
   1 =   Mild, infrequent, and not too disturbing distress.
   2 =   Moderate, frequent, and disturbing distress, but still manageable.
   3 =   Severe, very frequent, and very disturbing distress.
   4 =   Extreme, near constant, and disabling distress.

4. How much of an effort did you make to resist the obsessive thoughts? How often did you try to disregard or turn your attention away from those thoughts as they entered your mind?) Here we are not interested in knowing how successful you were in controlling your thoughts, but only in how much or how often you tried to do so.)

   0 =   I made an effort to always resist (or the obsessions are so minimal that there is not need to actively resist them).
   1 =   I tried to resist most of the time (i.e. more than half the time I tried to resist).
   2 =   I made some effort to resist.
   3 =   I allowed all obsessions to fill my mind without attempting to control them, but I did so with some reluctance.
   4 =   I completely and willingly gave in to all obsessions.

5. How much control did you have over your obsessive thoughts? How successful were you in stopping of diverting your obsessive thinking? (If you rarely tried to resist, in order to answer this question, please think about those rare occasions in which you did try to stop the obsessions). NOTE: Do not include here obsessions stopped by doing compulsions.

    0 =   Completed control.
    1 =   Much control; usually I could stop or divert obsessions with some effort and concentration.
    2 =   Moderate control; sometimes I could stop or divert obsessions.
    3 =   Little control; I was rarely successful in stopping obsessions and could only divert attention with great difficulty.
    4 =   No control; I was rarely able to even momentarily ignore the obsessions.

<center>COMPULSIONS</center>

Review the compulsions you checked on the Y-BOCS Symptom Checklist to help you answer these five questions. Please think about the last seven days (including today), and check one answer for each question.

6. How much time did you spend performing compulsive behaviour? How frequently did you perform compulsions? (If your rituals involved daily living activities, please consider how much longer it took you to complete routine activities because of your rituals).

    0 =   None. If you checked this answer, then also check 0 for questions 7,8,9, and 10 then answer 11 an 12.
    1 =   Less than 1 hour per day was spent performing compulsions, or occasional performance of compulsive behaviours (no more than 8 times a day).
    2 =   1 to 3 hours per day was spent performing compulsions, or frequent performance of compulsive behaviours (more than 8 times a day, but most hours were free of compulsions).
    3 =   More than 3 hours and up to 8 hours per day were spent performing compulsions, or very frequent performance of compulsive behaviours (more than 8 times a day and during most hours of the day).
    4 =   More than 8 hours per day were spent performing compulsions, or near-constant performance of compulsive behaviours (too numerous to count, and an hour rarely passes without several compulsions being performed).

7. How much did you compulsive behaviours interfere with your social or work functioning? (If you are not currently working, please think about your everyday activities.)

    0 =   No interference.
    1 =   Mild, slight interference with social or occupational activities, but overall performance not impaired.
    2 =   Moderate, definite interference with social or occupational performance, but still manageable.
    3 =   Severe interference, substantial impairment in social or occupation performance.
    4 =   Extreme, incapacitation interference.

8. How would you have felt if prevented from performing your compulsion(s)? How anxious would you have become?

    0 =   Not at all anxious.
    1 =   Only slightly anxious if compulsions prevented.
    2 =   Anxiety would mount but remain manageable if compulsions prevented.
    3 =   Prominent and very disturbing increase in anxiety if compulsions interrupted.
    4 =   Extreme, incapacitating anxiety from any intervention aimed at reducing the compulsions.

9. How much of an effort did you make to resist the compulsions? Or how often did you try to stop the compulsions? (Rate only how often or how much you tried to resist your compulsions, not how successful you actually were in stopping them.)

        0 =   I made an effort to always resist (or the symptoms were so minimal that there was no need to actively resist them)
        1 =   I tried to resist most of the time (i.e., more than half the time)
        2 =   I made some effort to resist
        3 =   I yielded to almost all compulsions without attempting to control them, but I did so with some reluctance.
        4 =   I completely and willingly yield to all compulsion.

10. How much control did you have over the compulsive behaviour? How successful were you in stopping the rituals (s)? (If you rarely tried to resist, please think about those rare occasions in which you did try to stop the compulsions, in order to answer this question.)

        0 =   I had complete control.
        1 =   Usually I could stop compulsions or rituals with some effort and willpower.
        2 =   Sometimes I could stop compulsive behaviour but only with difficulty.
        3 =   I could only delay the compulsive behaviour, but eventually it had to be carried out to completion.
        4 =   I was rarely able to even momentarily delay performing the compulsive behaviour.

11. Do you think your obsessions of compulsions are reasonable or rational? Would there by anything besides anxiety to worry about if you resisted them? Do you think something would really happen?

        0 =   I think my obsessions or compulsions are unreasonable or excessive.
        1 =   I think my obsessions or compulsions are unreasonable or excessive, but I'm not completely convinced that they aren't necessary.
        2 =   I think my obsessions or compulsions may be unreasonable or excessive.
        3 =   I don't think my obsessions or compulsions are unreasonable or excessive.
        4 =   I am sure my obsessions or compulsions are reasonable, no matter what anyone says.

12. Have you been avoiding doing anything, going any place, or being with anyone because of your obsessional thoughts or because you were afraid you would perform compulsions?

        0 =   I haven't been avoiding anything
        1 =   I have been avoiding doing a few important things
        2 =   I have been avoiding some important things
        3 =   I have been avoiding many important things
        4 =   I have been avoiding doing most everything

Appendix DD

Beck Anxiety Inventory

The BAI is a copyrighted instrument published by the Psychological Corporation. It cannot be reproduced in this thesis. For a copy of the BAI, contact:

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Locked Bag 16, St Peters

NSW 2044, Australia.

Ph. (+61) 02 9517 8958

Fx. (+61) 02 9517 2249

Email: tpc@harcourt.com.au

Appendix EE

Obsessional Beliefs Questionnaire-44

*items numbers correspond to those in OBQ-87 (OCCWG, 2002)

This inventory lists different attitudes or beliefs that people sometimes hold. Read each statement carefully and decide how much you agree or disagree with it. For each statement, choose the number matching the answer that best describes how you think. Because people are different, there are no right or wrong answers. To decide whether a given statement is typical of your way of looking at things, simple keep in mind what you are like most of the time. Use the following scale.

1	2	3	4	5	6	7
Disagree very much	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree very much

In making your ratings, try to avoid using the middle point of the scale (4), but rather indicate whether you usually disagree or agree with the statements about your own beliefs and attitudes.

6*   I think things around me are unsafe.   1 2 3 4 5 6 7

10   If I'm not absolutely sure, I'm bound to make a mistake.   1 2 3 4 5 6 7

13   Things should be perfect according to my own standards.   1 2 3 4 5 6 7

19   To be a worthwhile person, I must be perfect at everything I do.   1 2 3 4 5 6 7

20   When I see the opportunity to do so, I must prevent bad things from happening.   1 2 3 4 5 6 7

23   Even if harm is very unlikely, I should try to prevent it at any cost.   1 2 3 4 5 6 7

24   For me, having bad urges is as bad as actually carrying them out.   1 2 3 4 5 6 7

27   If I don't act when I foresee danger, then I am to blame for consequences.   1 2 3 4 5 6 7

28   If I can't do something perfectly, I shouldn't do it at all   1 2 3 4 5 6 7

31   I must work to my full potential at all times.   1 2 3 4 5 6 7

32	It's essential for me to consider all possible outcomes of a situation.	1 2 3 4 5 6 7
33	Even minor mistakes mean a job is not complete.	1 2 3 4 5 6 7
34	If I have aggressive thoughts or impulses about my loved ones, this means I may secretly want to hurt them.	1 2 3 4 5 6 7
35	I must be certain of my decisions.	1 2 3 4 5 6 7
38	In all kinds of daily situations, failing to prevent harm is just as bad as deliberately causing it.	1 2 3 4 5 6 7
39	Avoiding serious problems (for example, illness or accidents) requires constant effort on my part.	1 2 3 4 5 6 7
41	For me, not preventing harm is as bad as causing harm.	1 2 3 4 5 6 7
42	I should be upset if I make a mistake.	1 2 3 4 5 6 7
43	I should make sure others are protected from negative consequences of my decisions or actions.	1 2 3 4 5 6 7
45	For me, things are not right if they are not perfect.	1 2 3 4 5 6 7
46	Having nasty thoughts means I'm a terrible person.	1 2 3 4 5 6 7
50	If I do not take extra precautions, I am more likely than others to have or cause a serious disaster.	1 2 3 4 5 6 7
53	In order to feel safe, I have to be prepared as possible for anything that could go wrong.	1 2 3 4 5 6 7
55	I should not have bizarre or disgusting thoughts.	1 2 3 4 5 6 7
56	For me, making a mistake is as bad as failing completely.	1 2 3 4 5 6 7
57	It is essential for everything to be clear cut, even minor matters.	1 2 3 4 5 6 7

58	Having a blasphemous thought is a sinful as committing a sacrilegious act.	1 2 3 4 5 6 7
59	I should be able to rid my mind of unwanted thoughts.	1 2 3 4 5 6 7
61	I am more likely than other people to accidentally cause harm to myself or to others.	1 2 3 4 5 6 7
64	Having bad thoughts means I am weird or abnormal.	1 2 3 4 5 6 7
65	I must be the best at things that are important to me.	1 2 3 4 5 6 7
66	Having an unwanted sexual thought or image means I really want to do it.	1 2 3 4 5 6 7
67	If my actions could have even a small effect on a potential misfortune, I am responsible for the outcome.	1 2 3 4 5 6 7
68	Even when I am careful, I often think bad things will happen	1 2 3 4 5 6 7
69	Having intrusive thoughts means I'm out of control.	1 2 3 4 5 6 7
72	Harmful events will happen unless I'm careful.	1 2 3 4 5 6 7
74	I must keep working until it's done exactly right.	1 2 3 4 5 6 7
76	Having violent thoughts means I will lose control and become violent.	1 2 3 4 5 6 7
77	To me, failing to prevent disaster is as bad as causing it.	1 2 3 4 5 6 7
78	If I don't do a job perfectly, people won't respect me.	1 2 3 4 5 6 7
79	Even ordinary experiences in my life are full of risk.	1 2 3 4 5 6 7
83	Having a bad thought is morally no different than doing a bad deed.	1 2 3 4 5 6 7
84	No matter what I do, it won't be good enough.	1 2 3 4 5 6 7
86	If I don't control my thoughts, I'll be punished.	1 2 3 4 5 6 7

Appendix FF

Mauchley's Tests of Sphericity

	Mauchly's W	Approx. Chi-Square	df	P
PI	.127	62.793	9	.000
OBS-H	.175	52.973	9	.000
IMP-H	.216	46.674	9	.000
CONT	.153	57.077	9	.000
CHECK	.217	46.519	9	.000
DRESS	.114	66.120	9	.000
YBOCS	.172	50.00	9	.000
Y-OBS	.369	28.306	9	.001
Y-COM	.186	46.047	9	.000
OBQ-44	.067	82.266	9	.000
R	.137	60.405	9	.000
P	.123	63.620	9	.000
IOT	.094	71.831	9	.000
BDI	.318	34.824	9	.000
BAI	.276	39.135	9	.000
RSE	.119	37.117	9	.000
SAM	.411	18.130	9	.034

Note. PI = Padua Inventory-Revised; OBS-H = obsessional thoughts of harm to self or others; IMP-H = obsessional impulses to harm self or others; CONT = Contamination obsessions and washing compulsions factors; CHECK = Checking compulsions factor; DRESS = Dressing/grooming factor; YBOCS = Yale-Brown Obsessive Compulsive Scale; Y-OBS = YBOCS Obsession Subscale; Y-COM = YBOCS Compulsion Subscale; BDI = Beck Depression Inventory-II : BAI = Beck Anxiety Measure ; OBQ-44 = Obsessive Beliefs Questionnaire-44; R = OBQ Responsibility subscale ; P = OBQ Perfectionism subscale ; IOT = OBQ Importance of thoughts subscale; RSE = Rosenberg Self-esteem Inventory; SAM = Self-ambivalence Measure.

Appendix GG

Means (SDs) for Personality Scales across Time Intervals

	n	Time 1	n	Time 4	n	Time 5
BOR	31	11.26 (2.1)	29	10.18 (1.80)	36	10.69 (2.19)
OCPD	32	12.00 (1.72)	39	11.33 (2.12)	26	11.85 (2.22)
NAR	32	12.09 (2.04)	39	11.26 (1.58)	26	11.38 (2.12)

Note. BOR = Borderline Personality Disorder traits; OCPD = Obsessive Compulsive Personality disorder traits; NAR = Narcissistic Personality Disorder Traits

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