Self-perceptions as a vulnerability to obsessive-compulsive disorder: Investigation into self-ambivalence and a self-worth contingent upon high moral standards.

Claire Ahern, BSSc.
Student ID: 4098536

Supervisor: Professor Michael Kyrios

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Declaration

I declare that this report does not incorporate without acknowledgment any material previously submitted for a degree in any University, College of Advanced Education, or other educational institution, and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

I further declare that the ethical principles specifies in the policies and procedures of the Swinburne University Human Research Ethics Committee have been adhered to in the preparation of this report.

Name: Claire Ahern

Signed: _____

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Abstract

Using a cognitive framework, this study examined self-perceptions as a vulnerability to obsessive-compulsive disorder (OCD). Specifically, Guidano and Liotti's (1983) model of self-ambivalence and the notion of self-worth contingent upon moral standards were investigated as possible mechanisms to explain how individuals come to notice their unwanted intrusions. Additionally, this study examined specifically if intrusions with moral themes related to self-perceptions. All analyses controlled for the influence of depression. The sample comprised first year undergraduate psychology students; 95 females (M = 22.49 years, SD = 7.96) and 25 males (M = 21.64 years, SD = 7.26). Participants were administered a semi-structured interview and self-report questionnaires. Results indicated that ambivalence about meeting personal moral standards was a particular vulnerability to experiencing obsessive-compulsive (OC) phenomena. There was no support for a model of intrusions with moral themes being associated with self-perceptions independent of depression. The importance of depression was highlighted, directions for future research discussed and implications of the findings explored.

Self-perceptions as a vulnerability to obsessive-compulsive disorder: Investigation into self-ambivalence and a self-worth contingent upon high moral standards.

Obsessive-Compulsive Disorder

Obsessive-Compulsive Disorder (OCD) is a severe and incapacitating anxiety disorder associated with anxiety, frustration, doubt and shame for sufferers. The illness creates significant health-related and societal costs, as well as having a devastating impact on individuals' work and social functioning. Consequently, OCD is recognised to be a leading cause of disability by the World Health Organisation (2001). The incidence of OCD has been confirmed across all geographic, ethnic and socioeconomic populations (Antony, Downie & Richard, 1998) and, unlike many other disorders, is generally considered to affect males and females equally (American Psychiatric Association [APA], 2000). It has been estimated that 2.4 % - 3.2% of the developed world suffer from OCD at any one time, with lifetime prevalence rates of approximately 2% - 3.1% (Antony et al., 1998). While onset of OCD usually begins in adolescence and early adulthood (APA, 2000), sufferers often go undiagnosed for many years because of a lack of understanding and intense feelings of embarrassment and guilt (Antony et al., 1998).

The current version of the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV-TR) recognises the central feature of OCD to be the presence of obsessions and/or compulsions (APA, 2000). Obsessions are unwanted thoughts, images or impulses that are repetitive and intrusive. Sufferers experience their obsessions as hard to ignore and difficult to control, and thus, marked anxiety or distress ensues. Compulsions are repetitive, rigid and intentional behaviours or mental acts that are performed to reduce the anxiety or distress that follows an obsession, or to prevent some perceived threat (APA, 2000).

OCD is recognised to be largely heterogenous as the specific manifestation of these symptoms varies widely across patients (McKay et al., 2004). For instance themes of obsessions may include concerns about contamination and germs, safety and responsibility, doubts and unwanted sexual, violent or blasphemous thoughts (APA, 2000). Obsessions are distinguished from worries because they are perceived by the individual as excessive, irrational or uncharacteristic of their personality, values, or life circumstances. Compulsions include washing, checking, ordering, counting, praying rituals or compulsive acts. Sufferers are generally aware that their thoughts or behaviours are excessive or irrational, but they feel powerless to stop them. Consequently, OCD is highly associated with depression and is

recognised to be one of the most disturbing anxiety disorders (Masellis, Rector & Richter, 2003; Rachman & Sharfan, 1998). Indeed, Major Depressive Disorder (MDD) is the most frequently occurring comorbid disorder with OCD (Masellis et al., 2003; Sobin et al., 1999). Research has proposed that the comorbidity between OCD and MDD occurs because the disorders influence each other reciprocally. Depressive symptoms may develop as a result of the frustration and functional impairment associated with OCD (Donahue, 2005). Alternatively, given the relationship between low positive affect and negative thinking (Joiner & Rudd, 1996; Van der Does, 2005), depression may increase the tendency to interpret obsessions in a negative way (Rachman, 1997).

Given the distress and disability that OCD causes for the individual, their carers or family, and society, it is essential that research explores possible mechanisms relevant to the development and maintenance of OCD. While there are a range of theoretical frameworks for the aetiology of OCD, the behavioural and cognitive models have prompted advances in understanding and treating the disorder (Salkovskis, 1998). Behavioural theory proposes that obsessional fears are acquired through classical conditioning and maintained by operant conditioning (Kyrios, 2003), and provides theoretical justification for the primary psychosocial intervention of

OCD, exposure and response prevention (ERP; March, Frances, Carpenter & Kahn, 1997). ERP requires that individuals with OCD face the situations that induce anxiety and are then encouraged to refrain from engaging in compulsive rituals. Nonetheless the behavioural model and ERP have important limitations. Primarily, the behavioural framework fails to account for differences between OCD and other anxiety disorders. For instance the acquisition and maintenance of fear has been implicated in all anxiety disorders. The behavioural model cannot explain the different symptoms across anxiety disorders, nor can it account for the fact that few individuals with OCD recall conditioning experiences (Taylor, 2005). Moreover, ERP treatments appear to be less effective when depression comorbidity exists (Masellis et al., 2003). Indeed, around 27 – 50% of OCD patients show no significant improvement following ERP when allowances are made for refusal, drop-out and non-response rates (Abramowitz, Taylor, & McKay, 2005; Clark, 2005; Salkovskis, 1998). It was thus realised that an alternative approach was required that addressed the limitations and utilised the strengths of the behavioural model. As obsessions involve distorted thinking, it is understandable that the cognitive approach has dominated research over the last two decades (Clark, 2005; Salkovskis, 1998). The

following section outlines the cognitive theory of OCD and its limitations so to provide impetus for the current research.

Cognitive Theory of OCD

Central to the cognitive model of OCD is the understanding that unwanted intrusions form the basis of obsessions (Rachman, 1997). Unwanted intrusions are considered to essentially be a universal 'normal' phenomenon as the vast majority of non-clinical populations report that they experience intrusive thoughts, images or impulses (Clark & Purdon, 1995; Purdon & Clark, 1994; Rachman & de Silva, 1978). While many cognitive approaches to OCD have been developed (Clark & Purdon, 1993, 1995; Doron & Kyrios, 2005; Guidano & Liotti, 1983; Purdon & Clark, 1993, 1994; Rachman, 1997, 1998; Salkovskis, 1985, 1989), each recognise that intrusive thoughts of the general population and obsessional patients differ not in the content of unwanted intrusions, but in their appraisal.

According to the cognitive model, those individuals who misinterpret unwanted intrusions as personally significant and meaningful are more likely to develop OCD (Rachman, 1997). These faulty appraisals lead to negative automatic feelings of anxiety and discomfort, provoking obsessional individuals to respond to alleviate their distress. While neutralisation strategies, such as compulsions,

may reduce discomfort in the short term (Rachman & Shafran, 1998), they are maladaptive because the they negatively reinforce the misconception that the neutralisation was responsible for preventing the perceived negative outcomes (Rachman, 1998). Deliberate attempts to suppress unwanted intrusions paradoxically serve to worsen their salience, frequency and intensity because the individual pays increased attention (Newth & Rachman, 2001). Thus misinterpretation and neutralisation provoke unwanted intrusions to become obsessions.

A fundamental assumption of cognitive theory is that faulty appraisals are derived from an individual's general beliefs about the meaning of thoughts and thought processes. For instance, Salkovskis (1985, 1989, 1998) proposed that intrusive thoughts escalate in frequency and intensity because they activate dysfunctional beliefs about being pivotally responsible for harm to oneself or others. The idea that a maladaptive belief system influences misappraisal of unwanted intrusions has received staunch theoretical support (OCCWG, 1997; Purdon & Clark, 1993; Rachman, 1997, 1998; Salkovskis, 1985, 1989, 1999). Yet these ideas have not been fully validated empirically as relationships between obsessive-compulsive (OC) symptoms and maladaptive beliefs have provided inconsistent results (Wilson & Chambless, 1999).

Nonetheless, several findings support a relationship between OC symptoms and maladaptive beliefs (Bouchard, Rhéaume, & Ladouceur, 1999; Freeston, Ladouceur, Thibodeau, & Gagnon, 1992; Ladouceur et al., 1995; Rassin, Merckelbach, Muris, & Spaan, 1999; Steketee, Frost, & Cohen, 1998; Steketee, Frost, & Kyrios, 2003). For example Ladouceur et al. (1995) experimentally manipulated perceptions of responsibility in their non-clinical student subjects, and found that participants from the high responsibility group were significantly more anxious throughout the task and displayed significantly more doubting and checking behaviour. Conversely, other investigators have found no such relationship (Frost, Steketee, Cohen, & Griess, 1994; Rachman, Thordarson, Shafran, & Woody, 1995). For instance Frost et al. (1994) compared students with and without OC symptoms, and found no significant difference between the two groups on maladaptive beliefs of responsibility. Furthermore, Taylor et al. (2006) found that, in a sample of OCD patients, some acknowledged inflated OCD-related beliefs, while another group could not be distinguished from normal controls.

Cognitive researchers maintained that maladaptive beliefs were related to OC symptoms and acknowledged that contradictory findings such as these may be a reflection of the different definitions and measures used (OCCWG, 1997). For instance, large effect sizes

were demonstrated when responsibility beliefs were conceptualised as belief in one's power to cause harm (Ladouceur et al., 1995), as opposed to social responsibility (Frost, Steketee, Cohen, & Griess, 1994). It was realised that cognitive understanding of OCD could not advance with the use of alternate measures and definitions of beliefs. Hence, an international group of researchers in OCD, the Obsessive Compulsive Cognitions Working Group (OCCWG), coordinated their efforts to establish a standardised set of cognitive measures.

A comprehensive review of OCD literature by this group (Frost & Steketee, 2002; OCCWG, 1997, 2001) identified six core beliefs central to OCD: 1) an inflated sense of pivotal personal responsibility (e.g., the belief that one has the power to cause or prevent threat), 2) overestimation of threat (e.g., exaggerating the probability or severity of harm), 3) perfectionism (e.g., the belief that there is a perfect solution to every problem), 4) intolerance of uncertainty (e.g., beliefs in the necessity of being certain and an associated belief that one should not tolerate ambiguity or unpredictable change), 5) overimportance of thoughts (e.g., the belief that the presence of particular thoughts indicates their special significance), and 6) control of thoughts (e.g., overvaluation of the importance of controlling thoughts). A pool of questionnaire items were written to reflect each belief domain, and a measure was

developed to assess these dysfunctional beliefs, the Obsessive Beliefs Questionnaire (OBQ, 2002).

After considerable research, factor-analysis suggested that the six belief domains were best explained as three distinguishable factors: Responsibility/Threat Estimation, Perfectionism/Certainty, and Importance/Control of thoughts (OCCWG, 2003, 2005). As intrusions and OC phenomena are similar in clinical and non-clinical populations (Gibbs, 1996), much OCD literature examines analogue samples. Consequently the OBQ was designed to be applicable to all populations. The OBQ has shown good reliability and criterion-related validity in clinical and non-clinical samples (OCCWG, 2001, 2003, 2005). Interestingly, obsessional beliefs of the OBQ demonstrated a strong relationship with measures of depression in clinical OCD patients and in non-clinical samples (Faull, Joseph, Meaden & Lawrence, 2004; Muris, Meesters, Rassin, Merckelbach & Campbell, 2001; OCCWG, 2001, 2003). Thus, there is some suggestion that depressive symptoms have an association with obsessive beliefs as well as OC symptoms, consistent with the established relationship between low positive affect and negative thinking (Joiner & Rudd, 1996; Van der Does, 2005).

Importantly, research utilising the OBQ has provided further support for the cognitive theory of OCD with relationships between

maladaptive beliefs and OC symptoms consistently demonstrated in clinical (Lee, Kwon, Kwon & Telch, 2005; Storchheim & O'Mahony, 2006; Taylor, Abramowitz & McKay, 2005) and non-clinical subjects (Aardema, O'Connor, Emmelkamp, Marchand & Todorov, 2005; Abramowitz, Deacon, Woods & Tolin, 2004), and in individuals from different cultures (Sica et al., 2004).

It is the focus on changing these maladaptive belief systems that has promoted the development of cognitively-oriented therapy (COT) for OCD. The effectiveness of COT is consistently demonstrated to be comparable to ERP, and is thought to be more effective for OCD symptoms that show poor response to ERP (Abramowitz, Taylor & McKay, 2005; Clark, 2005; Taylor, 2005). Thus, by advancing the theoretical understanding of OCD, the cognitive framework has also had positive implications for effective treatment of OCD.

Despite these advantages there are some notable limitations surrounding the maladaptive beliefs that need to be addressed. For instance, the cognitive theory gives no theoretical account for how individuals have developed these beliefs and does not explain why only certain thoughts are interpreted as significantly threatening (Doron & Kyrios, 2005). Also, the three principle belief domains of OCD may not necessarily reflect all thinking styles associated with

OCD (OCCWG, 2003; Taylor et al., 2006). In the construction of the OBQ for instance, the belief domains showed moderate intercorrelations (r = .42 - .57) (OCCWG, 2005). While the interrelationship between scales may be a reflection of common loading to OCD, it may also represent underlying core belief/s. Indeed, as the current framework ignores core beliefs, some investigators have criticised the cognitive model for not being cognitive enough (Sookman, & Pinard, 1999; Sookman, Pinard & Beauchemin, 1994). Additionally, the cognitive model gives an inadequate explanation for why dysfunctional beliefs are not always identified in cases of OCD (Taylor et al., 2006). Some individuals, for example, may feel compelled to perform compulsions because of sensory or affective phenomena, and not because they have a dysfunctional belief.

In support of previous research (Bhar, 2004; Bhar & Kyrios, 2000; Doron & Kyrios, 2005; Guidano & Liotti, 1983), the current study proposes that a cognitive framework for OCD that incorporates ambivalence about self-worth and a self-worth based on moral standards may help to clarify some of the current issues surrounding the maladaptive beliefs. The following section elaborates on this proposal.

Self-Concept in Obsessive-Compulsive Disorder

Cognitive models recognise the self, or self-concept, to be a mental representation that constitutes one's theory of self (Doron & Kyrios, 2005). Self-perceptions are purported to have organisational functions; providing individuals with beliefs and guidelines for interpreting meaning in their world (Harter & Whitesell, 2003). Thus, a detrimental self-concept will predispose individuals to correspondingly develop maladaptive beliefs and to interpret their environment in a harmful way. While there is support that a maladaptive self-perfection is linked to a range of psychological disorders such as depression (Beck, 1976), post traumatic stress disorder (Foa, Ehlers, Clark, Tonlin, & Orsillo, 1999) and social anxiety (Prinstein, Cheah, & Guyer, 2005), few researchers have applied the idea that there may be a dysfunctional self-concept in individuals with OCD (Bhar, 2004; Bhar & Kyrios, 2000; Doron & Kyrios, 2005; Guidano & Liotti, 1983). Given the limitations that surround the cognitive theory of OCD, it is surprising that little emphasis has been placed on investigating the self-concept as a vulnerability to OCD.

These notions become increasingly important as theoretical accounts imply that self-perceptions are related to OCD. For instance, Rachman's cognitive account of OCD acknowledges that intrusions

interpreted as revealing hidden aspects of the self cause distress and anxiety for the individual and are more likely to become obsessions. Similarly, Purdon and Clark (1999) theorise that unwanted intrusions that are inconsistent with an individuals self-concept (i.e., ego-dystonic) are likely to turn into obsessions because they represent a threat to the individual's self-view. Additionally, Hallam and O'Connor (2002) note that it is common for OCD sufferers to find their obsessions and compulsions as alien to their sense of self.

There is also some empirical evidence to suggest that ego-dystonic intrusions are more likely to cause distress and become obsessions. For instance, sexually anxious and erotophobic students reported feeling more disapproval and more distress about sexual intrusions, and a greater desire to avoid sexual intrusions, than students with a positive disposition toward sexuality (Byers, Purdon & Clark, 1998). Similarly, Rowa, Purdon, Summerfeldt and Antony (2005) assessed individuals with OCD on their most and least upsetting current obsessions and found that distress ratings were best explained by the degree to which intrusions contradicted the individual's sense of self. This finding has also been demonstrated in a non-clinical population (Rowa & Purdon, 2003). Additionally, Rachman and de Silva (1978) demonstrated that the intrusions

reported by a cohort with OCD were more alien to individuals' sense of self than the intrusions of a non-clinical sample.

While there are a multitude of theoretical conceptualisation of self-concept, Guidano and Liotti's (1983) model of self-ambivalence is one of the few that directly addresses OCD and its developmental prequelae.

Guidano and Liotti's (1983) Theory of Self-Ambivalence

Following from the work of Bowlby (1969), Guidano and Liotti (1983) contend that the view of oneself implied by early attachment experiences provides the individual with an inner working model, or a set of expectations, about other close relationships. For instance, as cognitive developments become more abstract from adolescence into adulthood, the search for a coherent integration of self involves a continuous return to beliefs and schemata gathered during infancy and childhood. Hence the authors recognise one's self-concept is a result of, but not limited to, childhood experiences. Drawing from cognitive, developmental and social frameworks, Guidano and Liotti (1983) further propose that individuals that have an ambivalent self-concept are predisposed to developing OCD. As explained in the following paragraphs, the theory of self-ambivalence is based upon three related features: contradictory self-views,

uncertainty about self-worth and preoccupation in verifying one's self-worth.

Guidano and Liotti (1983) postulate that as a result of childhood attachment experiences, individuals with OCD develop a self-concept based on contradictory and competing self-views. These views are polarised into positive and negative terms that the individual has difficulty integrating into a united self-concept. They contend that self-ambivalent individuals concurrently see themselves as both 'worthy' and 'unworthy'. The authors maintain that during the developmental period, children begin to structure a self-image through interaction with the people closest to them. Parents in particular provide their children with meaningful sources of information. It is through this information that children learn to recognise attributes that define them as worthy to others, and consequently to themselves. In short, Guidano and Liotti (1983) propose that the "parents, as a mirror, provide children with a self-image" (p. 103). In a healthy and reciprocal relationship, the caregiver responds to the child's signals in an appropriate fashion and validate the child's internal experience. The authors contend that the reciprocity of the attachment relationship of self-ambivalent individuals is poor, where parental behaviour toward the child is perceived by the child to have plausible but competing interpretations about their worth concurrently. For

example, the parent may constantly care for and show interest in the child, but be unaffectionate and undemonstrative. According to Guidano and Liotti, OCD is characterised by ambivalent attachments derived from parenting styles experienced as rejecting but camouflaged by an outward mask of absolute devotion.

Guidano (1991) has further suggested that this gives the child a sense of unpredictability and uncontrollability in their attachment relationship, creating an environment where any available understanding is inevitably experienced to be possibly wrong. As a result, the child experiences recurrent oscillations between contradictory feelings, encouraging incompatible and changing self-views. In order to achieve a coherent self-image, Guidano and Liotti (1983) propose that self-ambivalent individuals tend to favour one of the dichotomous views as reflecting the "true" nature of themselves. Nevertheless, the opposing self-view is still held, and because the alternate self-perceptions are polar and thus specific, they are easy to dispute. Consequently the individual's favoured position is not securely attained and their self-perception continues to fluctuate from one extreme to the next. Guidano and Liotti maintain that one's self-concept involves continuous feedback from ongoing self-perceptions. As contrasting and changing self-views make it difficult for the individual to be certain about evaluations of the self, it is proposed

that self-ambivalent individuals develop uncertainty about their self-worth. Because self-ambivalence is concerned with evaluations of self-worth, a distinction with self-esteem should be made clear. Specifically, self-esteem involves the extent that the self is regarded positively or negatively (Campbell et al., 1996), whereas self-ambivalence relates to the certainty of these evaluations.

In order to achieve clarification of their self-worth, Guidano and Liotti (1983) propose that self-ambivalent individuals are in constant pursuit of certainty in their self-worth. It is purported that throughout development, the family environment is highly verbal, where rational explanations and analytical reasoning prevail. The parents demand responsibility, and positive regard is conditional on explicitly conforming to moral rules and ethical principles. Consequently, the child learns that these values are central to their sense of self, and that their self-worth depends upon their ability to comply with moral rules. Thus, self-ambivalent individuals focus on perfectionistic adherence to certain criteria, such as conforming to precise moral rules, as verification of their self-worth.

Due to having grown up in a predominantly verbal environment, self-ambivalent individuals learn that feelings and emotional expressions incongruent with these beliefs must not only be controlled, but not felt at all. To be satisfied that one has met personal

demands, the self-ambivalent individual purportedly feels it necessary to exclude and control any mixed feelings from uncertainty. As these feelings are inevitable, the individual experiences a pervasive sense of uncontrollability and is thus impelled to move further towards verbal and analytic reasoning, placing upmost importance on managing thoughts and behaviour (Guidano, 1987; 1991). As the self-ambivalent individual becomes selectively inattentive to emotional experiences, they vigilantly evaluate their thoughts and behaviours as a meaningful measure of their self-worth, so that their "sense of personal worth is intertwined with omnipotence of thought" (Guidano, 1987, p. 178). In this way, self-ambivalent individuals are particularly predisposed to attending to unwanted intrusions, the basis of obsessions characteristic in OCD.

Self-Ambivalence and Obsessive-Compulsive Phenomena

According to Guidano and Liotti (1983), unwanted intrusions that challenge the reliability of one's self-worth are likely to arouse excessive alarm, partly due to their uncontrollable nature, but mostly because they threaten the self-ambivalent individual's rigid standards of moral perfectionism. Consequently, the thought becomes more salient and is likely to be perceived as particularly meaningful. Intrusions are then more likely to be attended to, and this in turn

exacerbates their frequency and intensity (Rachman, 1997). This way, self-ambivalent individuals are particularly liable to develop obsessions characteristic of OCD.

As obsessions develop from excessive attention to intrusions that threaten valued self-views, the self-ambivalent individual seeks to reinstate their self-worth. Thus Guidano and Liotti (1983) suggest that neutralisation strategies, such as compulsions, become solutions for self-ambivalent individuals to control these mixed feelings. Whilst the authors do not mention how specific compulsions develop, they contend that each compulsive act is designed to control ambivalent feelings. For instance, an individual may compulsively recite prayers in order to resolve blasphemous thoughts. Another individual may engage in compulsive checking in order to avoid feelings of irresponsibility. Doing so provides the individual with evidence that they are adhering to their moral values, and thus their moral self-worth is reinstated. So, rather than acknowledging their limitations, the self-ambivalent individual strives for total control, believing that there is a need to be more vigilant, to try harder; "the solution is to become more perfect, and thus even more obsessional" (Guidano, 1987, p. 186).

While not specifically mentioned by the authors, Guidano and Liotti's (1983) model of self-ambivalence may also provide a

theoretical framework for the development and maintenance of the maladaptive belief systems central to OCD (OCCWG, 2005). For instance, given that self-ambivalent individuals are preoccupied with seeking certainty regarding their self-worth, it seems highly likely that they may develop intolerance of uncertainty. Due to the rigid standards that self-ambivalent individuals deem essential to their self-worth, particularly with respect to control and personal standards, it also seems likely they will develop beliefs about perfectionism and control of thoughts. Furthermore, an inflated sense of responsibility could logically emerge in self-ambivalent individuals as a result of their strong commitment to prevent negative outcomes and maintain their idealised self-perception. As self-ambivalent individuals are prone to exaggerate the harm that intrusive thoughts will have on their self-worth, it also seems probable that they will hold maladaptive beliefs concerning the overestimation of threat. Thus Guidano and Liotti's (1983) model of self-ambivalence suggests that the belief systems thought to be central to OCD may have evolved as a consequence of their attentiveness to thoughts and mechanisms to protect the valued self-view.

Despite the importance that self-ambivalence is purported to have on vulnerability to obsessions, compulsions and maladaptive beliefs, Guidano and Liotti's (1983) model is based solely on clinical

observations. A review of empirical evidence identified only one research group that has empirically examined the association between self-ambivalence, obsessive-compulsive (OC) beliefs and OC symptoms (Bhar, 2004; Bhar & Kyrios, 2000). Drawing from the theory of self-ambivalence, clinical experience and consultation with clinicians familiar with Guidano and Liotti's model, this research group developed an instrument to assess individuals' level of self-ambivalence, the Self-Ambivalence Measure (SAM). Items in the SAM represented the three features central to self-ambivalence: dichotomous self-views, uncertainty about self-worth and preoccupation with verifying self-worth. Consistent with this definition, the SAM correlated with measures of self-dichotomy, self-clarity and self-preoccupation (Bhar, 2004). In a large sample (N = 392), individuals with OCD scored significantly higher on the SAM than non-clinical individuals. However, while OCD participants had higher SAM scores than participants with other anxiety disorders, this difference was not significant, although expected differences on OC beliefs were also not found in this study. Interestingly, Bhar (2004) also found a strong association between self-ambivalence and depression. Bhar and Kyrios (2000) conducted a series of hierarchical regression analyses to examine the relationship of self-ambivalence, maladaptive beliefs and OC symptoms in psychology undergraduates.

One regression demonstrated that the SAM significantly predicted OC beliefs independent of OC symptoms. Further, when the association between beliefs and self-ambivalence was partialed out, the interrelationships between the OC beliefs decreased markedly. Finally, SAM also significantly predicted OC symptoms, but this relationship was fully mediated by OC beliefs. These are promising findings but it is important that they are replicated before cognitive frameworks can incorporate an ambivalent self-concept as a vulnerability to OC phenomena.

While there is preliminary evidence to support that an ambivalent self-concept is related to OC phenomena, there are nevertheless certain limitations. Namely, the SAM is a uni-dimensional measure of general ambivalence about self-worth and fails to capture important notions regarding the multidimensional and contingent nature of self-worth (Eccles et al., 1989; Harter & Whitesell, 2003; Markus & Wurf, 1987; Marsh, Parada, & Ayotte, 2004). This is problematic as Guidano and Liotti (1983) suggest that the self-worth of ambivalent individuals depends largely on their ability to comply with moral rules. Thus, the SAM fails to capture an integral part to the theory of self-ambivalence.

Contingent Moral Self-Worth

While the self was traditionally treated as a stable and unitary generalised construct, current research shows self-perceptions to be dynamic and multifaceted: that is, individuals may have alternate concepts of themselves in different situations that are integrated into a global self-view (Eccles et al., 1989; Marsh et al., 2004). Individuals hold their various self-relevant domains at different levels of importance, where global self-worth can be largely influenced by domains that one regards as more rather than less important (Harter & Whitesell, 2003). Crocker and colleagues (Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Crocker & Park, 2004; Crocker & Wolfe, 2001) argue that when an individual's perceived competence in their valued domains has been achieved, self-worth is enhanced and there are temporary boosts of positive affect, such as pride. Conversely, failure in these domains leads to a drop in overall self-esteem and increases in negative emotions such as sadness (Crocker & Park, 2004), anger and shame (Tangney, Wagner, Hill-Barlow, Marschall, & Gramazow, 1996). As a result, self-worth contingencies may serve as a liability for the development of psychopathology when individuals are faced with threats to their important domains. For instance Rudolph, Caldwell and Conley (2005) found that children who base their self-worth on peer approval yet perceive themselves to fall short of this

important domain experience emotional distress, such as anxiety and depressive symptoms, and reduced global self-worth.

In line with Guidano and Liotti (1983), researchers suggest that an individual's contingencies of self-worth are associated with specific attachment styles, where inconsistent feedback from parents, such as fluctuations in approval and disapproval, provide conflicting messages to the child (Crocker & Park, 2004; Harter & Whitesell, 2003). When combined with pressures to feel or behave in specific ways, the individuals is likely to develop an unstable sense of self-worth that is contingent upon perceived competence in personally important domains. For instance Harter, Marold and Whitesell (1992) reveal that a contingent self-worth develops when parents make their approval contingent upon their children meeting very high and often unrealistic standards. Consequently there is a suggestion that a multi-dimensional self-concept, where global self-worth is influenced by competence in important self-domains, may be relevant to Guidano and Liotti's (1983) theory of self-ambivalence.

In particular, a self-worth that is highly contingent upon moral standards may have particular relevance to OCD. Interestingly, this proposal has been theoretically and empirically implied from literature outside Guidano and Liotti's (1983) model. Rachman (1997) has argued that those individuals who strive for moral perfectionism are

more prone to obsessions as they view all of their actions and thoughts as significant markers of their moral standing. Additionally, Shafran, Thordarson and Rachman (1996) hypothesise that individuals with OCD have a tendency to view their unacceptable thoughts as morally equivalent to unacceptable actions, a process they labelled Moral Thought Action Fusion (Moral-TAF). They propose that Moral-TAF is an appraisal process that leads an individual to inflate the significance of their thoughts. This then drives the individual to try and suppress such thoughts, which paradoxically serves to intensify the intrusions so that they become obsessions. In support of this theory, Moral-TAF was demonstrated to predict thought suppression, which in turn predicted OCD symptoms in a psychology undergraduate sample (Rassin, Muris, Schmidt, & Merckelbach, 2000).

The content of moral intrusions can relate to a variety of themes, including sex (Gordon, 2002), religion (Abramowitz et al., 2004) or ethical values (Ferrier & Brewin, 2005), although even intrusions that are seemingly unrelated to morality can be interpreted as having moral overtones (Guidano & Liotti, 1983). Examination of detailed case analyses show that a variety of obsessions can have strong moral connotations. One individual with OCD viewed her own intrusions from an outsider's perspective, and judged intrusions

regarding symmetry to be morally unacceptable because they were "crazy" (O'Neill, 1999, p. 81). Another found his intrusions distressing because of the implications that they had on his moral worth (O'Neil, Cather, Fishel, & Kafka, 2005). This individual had thoughts of harming his two year old son and was driven to hold his son after an intrusion, not to ensure that his son was safe but to reassure himself that he was not evil.

There is also some empirical support that morality may be relevant to the self-worth of individuals with OCD. For instance, when compared with anxious and community controls, individuals with OCD were significantly more likely to make negative moral inferences about themselves from their intrusions (Ferrier & Brewin, 2005). These authors additionally report that the 'feared self' of the OCD sample was significantly more likely to consist of bad and immoral traits. Of particular interest to the current study, Doron, Kyrios and Moulding (in press) analysed undergraduate psychology students on a variety of self-concept domains, OC beliefs and OC symptoms. Self-domains were conceptualised as 'sensitive' if the individual highly valued the domain yet concurrently felt incompetent in that domain. Individuals sensitive in moral self-concept demonstrated significantly greater OC beliefs and symptoms than individuals not sensitive in moral self-concept, even when general

self-esteem was controlled statistically. Overall, in line with Guidano and Liotti's (1983) theory of self-ambivalence, when theoretical and empirical studies and case analyses are taken together, there is mounting evidence that a moral self-concept may have a particular association with OC phenomena.

Cognitive theory has traditionally considered that it is the appraisal of intrusions rather than the content per se, that leads an individual to experience intrusions as significant and personally distressing. More recently though, it has been proposed that intrusion content and appraisal process are meaningfully related (Hallam & O'Connor, 2002). According to Rachman (1998), the content of intrusions will be determined by themes that are a prominent part of an individual's life values. Correspondingly, Rowa et al. (2005) demonstrated that the content of intrusions relate to current life stresses in individuals with OCD. Guidano and Liotti (1983) do not necessarily specify that the obsessions of self-ambivalent individuals have moral themes; they give an example of an intrusion appraised as threatening an individual's moral self-worth, even though the content was seemingly unrelated (e.g., a horrific accident). Nonetheless, there is a lack of clarity within the literature about the relationships between specific OC beliefs, self-perceptions and intrusion content. Appraisals and their resulting effects (e.g., compulsions) may be one reason for

the persistence of specific intrusions, but individuals may be more prone to the experience of intrusions with specific content because of personal vulnerabilities (i.e., self-ambivalence, self-contingencies).

Research aims

The current study investigates several aspects surrounding the theory of self-ambivalence, self-worth based on high moral standards, maladaptive OC beliefs and OC symptoms. Given that non-clinical populations suffer from the same type of symptomatology as OCD patients (Gibbs, 1996), analogue research methods were considered a worthwhile method for examining hypotheses about OCD. The primary aim of the current study was to examine the relationship between self-ambivalence, OC beliefs and OC symptoms in a non-clinical sample. Central to Guidano and Liotti's (1983) theory of self-ambivalence is the proposal that a self-worth that is highly contingent upon meeting moral demands, which for the purpose of brevity is herein referred to as moral self-worth, makes individuals particularly vulnerable to developing OCD. Thus, a further aim of the current study was to extend the work of previous researchers (Bhar, 2004; Bhar & Kyrios, 2000) and explore the combined influence that self-ambivalence and moral self-worth have on OC beliefs and OC symptoms. A final aim of the current study was to expand upon the

available literature presented to establish if intrusions with moral themes are related to self-ambivalence or a self-worth highly dependent on meeting moral standards. As depressive symptoms are highly associated with OC symptoms (Rachman & Shafran, 1998), obsessive beliefs (Faull et al., 2004), and self-ambivalence (Bhar, 2004), subsequent analyses aimed to control for the confounding influence of depression.

Hypotheses

1. It was predicted that self-ambivalence will significantly predict OC symptoms, above and beyond the influence of depression.
2. It was hypothesised that after controlling for depression, OC beliefs will mediate the relationship of self-ambivalence to OC symptoms
3. By examining the interaction of self-ambivalence and moral self-worth, it was hypothesised that self-ambivalence will moderate the relationship between a self-worth contingent upon moral standards to OC symptoms. Specifically, controlling for depressive symptoms, moral self-worth will only be positively related to OC symptoms when self-ambivalence is high.
4. It was further predicted that, after controlling for the influence of depression, OC beliefs will mediate the relationship between the

interaction of self-ambivalence and moral self-worth, and OC symptoms.

5. It was hypothesised, that after controlling for the influence of depression, individuals who experience moral intrusions would tend to score significantly higher on self-ambivalence than individuals without moral intrusions.
6. Finally, it was hypothesised that when compared with individuals who do not experience moral intrusions, individuals who do would tend to score significantly higher on moral self-worth, after the influence of depression has been controlled.

Method

Participants

The sample comprised 120 first year undergraduate psychology students from the Hawthorn and Lilydale campuses of Swinburne University of Technology in Melbourne. All participants volunteered in exchange for course credit. The sample group consisted of 95 females aged between 18 and 50 years ($M = 22.49$, $SD = 7.96$) and 25 males aged between 18 and 51 years ($M = 21.64$, $SD = 7.26$). For 71.7% of the participants, it was their first year of education after finishing high school, while 28.3% had received further education. Participants self-described ethnicity was predominantly reported as Australian (83%),

with the balance of the participants describing themselves as Asian (9%), European (3%), Middle Eastern (3%) or Other (2%). Of the 120 participants, 103 had never been married, 7 lived with their partners, 6 were married and 4 were divorced or widowed.

Materials

Each participant was administered a semi-structured interview on their demographic characteristics and their experience of unwanted intrusions over the past three months. Each participant additionally completed a battery of self-report questionnaires designed to measure many facets of Obsessive-Compulsive Disorder (OCD) related phenomena, self-concept and mood. As this study was part of a larger one, only items and questionnaires relevant to the present study are described. Refer to Appendix A for a complete copy of the interview and measures.

Depression Anxiety Stress Scale Short Form (DASS-21; Lovibond & Lovibond, 1995). The depression subscale of the DASS-21 (DepDASS-21) was utilised to measure participant's level of depression over the past week. Through analysis of clinical and non-clinical samples, the authors determined low positive affect to be the strongest marker of depression. Consequently the 7-items of the self-

report depression subscale measures symptoms typically associated with dysphoric mood (e.g., sadness or worthlessness). Sample items include “I felt down-hearted and blue” and “I found it difficult to work up the initiative to do things”. Participants rated their level of depression on a four-point scale (0 = did not apply to me at all, 3 = applied to me very much or most of the time). Scores were summed across items, with higher scores indicating greater levels of depression, and the possible total range between 0 and 21.

DepDASS-21 has demonstrated sound internal consistency on a large adult population (α = .88), and good convergent and discriminant validity when compared with other measures of depression (Henry & Crawford, 2005). Demonstrating concurrent validity, when compared with other clinical subjects, scores on the DepDASS-21 were only elevated in patients diagnosed with Major Depressive Disorder (Antony, Bieling, Cox, Enns, & Swinson, 1998).

Self-Ambivalence Measure (SAM; Bhar, 2004; Bhar & Kyrios, 2000, 2006). The SAM is self-report instrument designed to measure ambivalence about participant’s general sense of self-worth. Across 19-items, three aspects of self-ambivalence were assessed: self-uncertainty (“ I doubt whether others really like me”), self-dichotomy (“I tend to evaluate myself in terms of ‘good’ and ‘bad’”) and self-

preoccupation (“I think about my worth as a person”). Participants indicate the extent to which they agree with each statement on a 5-point scale (0 = not at all, 4= agree totally). Total scores were summed across items, where higher scores indicated higher levels of general self-ambivalence, with the possible total range being between 0 and 76. The authors report the SAM to have shown high internal consistency in clinical and non-clinical cohorts (α = .91 - .93), and to have demonstrated satisfactory convergent and discriminant validity.

Contingencies of Self-Worth Scale. (CSWS; Crocker et al., 2003). The 5-item morality subscale of the self-report CSWS was used to examine the extent that participant’s perceive their self-worth to be dependent upon their ability to be a moral person (MoralCSWS). Participant’s were asked to consider how each statement describes the way they personally see others and themselves, and reported their answers on a 7-point scale (1 = strongly disagree, 7 = strongly agree). A sample item includes “My self-esteem depends on whether or not I follow my moral/ethical principles”. Total morality subscale scores were summed across items with the possible total range being between 5 and 35. Higher scores indicated that participants more strongly perceive their self-worth to be dependent upon their moral abilities.

Crocker et al. (2003) show that for US college students of different ethnicities, MoralCSWS demonstrated adequate internal consistency (α = .83) and temporal stability over 3, 5 and 8 month intervals (range r = .62 - .68). Additionally the moral subscale displayed concurrent validity by significantly predicting more time spent volunteering.

Obsessive Beliefs Questionnaire-44 (OBQ-44; Obsessive-Compulsive Cognitions Working Group [OCCWG], 2005). The OBQ-44 measures beliefs considered pertinent to development of obsessions in OCD. Across clinical and non-clinical cohorts, the 44-items on the OBQ-44 reflect three underlying factors: inflated responsibility and overestimation of threat ("Not preventing harm is as bad as causing harm"), perfectionism and intolerance of uncertainty ("I should be upset if I make a mistake"), and over importance and need to control thoughts ("I should be able to rid my mind of unwanted thoughts"). Participants' self-report the extent that each item reflects their own typical beliefs and attitudes on a 7-point scale (1 = disagree very much, 7 = agree very much). Total OBQ-44 scores were calculated by summing across items, with higher scores suggesting greater conviction in OC beliefs. In both OCD and non-OCD samples (anxious, student and community controls), the OBQ-44 total and

subscale scores demonstrated excellent internal consistency (α = .89 - .95) (OCCWG, 2005). Additionally, as evidence of concurrent validity, the OBQ-44 total was able to significantly discriminate between the OCD and non-OCD sample.

Vancouver Obsessive Compulsive Inventory (VOCI; Thordarson et al., 2004). The 55-item self-report VOCI was designed to assess a wide range of obsessions, compulsions, avoidance behaviour and personality characteristics of importance in OCD. Consequently the VOCI measures six main classifications of OC symptoms; contamination ("I feel very dirty after touching money"), checking ("One of my major problems is repeated checking"), obsessions ("I am often upset by unwanted urges to harm myself"), hoarding ("I find it almost impossible to decide what to keep and what to throw away"), just right ("I feel compelled to count things"), and indecisiveness ("I find it difficult to make even trivial decisions"). Participants rate the extent that each item is true of them on a 5-point scale (0 = not at all, 4 = very much). Total VOCI scores were calculated by summing across items, where higher scores suggest greater levels of OC Symptoms.

On a student sample, the authors show the VOCI total to have excellent internal consistency (α = .96) and convincing evidence of

convergent and concurrent validity (Thordarson et al., 2004). For instance, the VOCI total was highly correlated with other well established measures of OCD phenomena and the OCD sample scored significantly higher on the VOCI total when compared with anxious controls.

The International Intrusive Thoughts Interview Schedule (IITIS; Clarke et al., 2006). The newly developed IITIS is a semi-structured interview schedule used to assess an individual's experience of unwanted intrusions. The IITIS guides interviewers to educate participants on common features and the nature of unwanted intrusions. After providing participants with some examples, the IITIS prompts interviewers to ask if, over the past three months, participants had experienced any unwanted intrusions. Individuals who had intrusions were invited to give a detailed personal example. The current study was only interested to identify those participants' who had unwanted moral intrusions ("involved something that was a violation of your moral or religious beliefs") and/or unwanted sexual intrusions ("the thought or image of engaging in a sexual act that you find disgusting or immoral"). Intrusions were only coded "moral" if the most disturbing aspect of the intrusion was that it violated their moral beliefs. Similarly sexual intrusions were to be distinguished

from sexual fantasies in that they were more negative and were considered by the participant to be unacceptable and unwanted. Provided these requirements were met, the participant would be coded as having experienced moral and/or sexual intrusions. Separate interviews were conducted with student researchers, who were briefed in classifications of unwanted intrusions by an experienced clinician. The inter-rater reliability between three researchers in coding moral and sexual intrusions was high (r = .96).

Procedure

Students were invited to participate through the university's first year psychology research experience program. Those willing to participate were given a plain language statement (PLS) that briefed participants on the aims of the study and informed participants about their ethical rights. Eligible participants were required to be 18 years or over and to sign informed consent.

All participants were interviewed individually using the IITIS and given a battery of pen and paper self-report questionnaires. As the IITIS included examples of unwanted intrusions, the order of the interview and questionnaire was counterbalanced to control for learning effects. The questionnaires were presented initially in the following order: DASS (Lovibond & Lovibond, 1995), CSWS

(Crocker et al., 2003), SAM (Bhar, 2004), OBQ-44 (OCCWG, 2005), VOCI (Thordarson et al., 2004). The order of the measures was then rotated.

A standardised debriefing procedure followed whereby participants received detailed information about the purpose of the study. All participants received contact information of available support services and in the case of participants reporting current distress, were followed up by the research supervisor.

Results

Preliminary Analyses

All data were analysed using the Statistical Package for the Social Sciences (SPSS) 13.0. Prior to hypothesis testing, preliminary data analyses were performed. No univariate outliers were detected ($z \pm 3.29$) (Tabachnick & Fidell, 1996). Corresponding with the assumptions of multiple regression, multivariate outliers were identified and after checking that they were randomly distributed, significant multivariate outliers were removed (Mahalanobis' Distance $p < .001$). Examination of residual scatterplots revealed that assumptions for linearity and homoscedasticity were met. There was

also no evidence of multicollinearity or violation of singularity assumptions.

Examination of missing values indicated that six cases were found to have missing values over 30% for at least one of the scales. These cases were consequently removed from further analyses. Missing values for the remaining cases were replaced with the series mean, to preserve the mean of the data distribution as a whole (Tabachnick & Fidell, 1996).

Based on skewness and kurtosis ratios, scores on the SAM, and OBQ-44 were normally distributed. Scores on the DepDASS-21 and VOCI were significantly positively skewed and so were transformed using a square root transformation. Scores on the MoralCSWS were significantly negatively skewed and were transformed with negative square root transformation. All transformed variables were subsequently normally distributed, and unless otherwise indicated, transformed values were use in the analyses.

Descriptive Statistics and Correlations

To assess the internal consistency of the measures used in the study, Chronbach's alpha coefficients were calculated. Table 1 displays the means, standard deviation, range and reliabilities of each variable. All variables showed satisfactory internal reliability.

Table 1

Means, Standard Deviation, Range and Reliabilities of the Variables

Variable	*M*	*SD*	*Range*	α
DepDASS-21	5.05	4.11	0 – 19	.86
SAM	30.70	13.24	6 – 73	.94
MoralCSWS	23.99	5.17	5 – 35	.86
OBQ-44	148.06	36.21	59 – 257	.96
VOCI	38.43	26.51	0 - 130	.96

Note. $N = 105$. DepDASS-21 = Depression subscale of DASS-21, SAM = Self-Ambivalence Measure, MoralCSWS = Moral subscale of CSWS, OBQ-44 = OBQ-44 total, VOCI = VOCI total. All means are for non-normally adjusted and non-centred variable values.

In order to assess the strength of interrelationships between measures and to identify potential difficulties with multicollinearity, Pearson correlations were calculated as displayed in Table 2. Table 2 shows that all variables generally exhibited moderate intercorrelations, with the exceptions of a self-worth contingent upon high moral standards (moral self-worth), which only demonstrated a significant association with OC beliefs.

Table 2

Summary of Bivariate Correlations Between Variables

	1	2	3	4	5
1. DepDASS-21	1.00				
2. SAM	.57**	1.00			
3. MoralCSWS	.07	.11	1.00		
4. OBQ-44	.41**	.37**	.30**	1.00	
5. VOCI	.45**	.40**	.05	.66**	1.00

Note. $N = 105$. DepDASS-21 = Depression subscale of DASS-21, SAM = Self-Ambivalence Measure, MoralCSWS = Moral subscale of CSWS, OBQ-44 = OBQ-44 total, VOCI = VOCI total. All correlations are for normally adjusted and centred variable values.

** $p<.01$.

The relationship of Self-Ambivalence to Obsessive-Compulsive Symptoms

To test the first hypothesis, that self-ambivalence (SAM) would predict OC symptoms (VOCI), over and above depression (DepDASS-21), a hierarchical regression analysis was performed. With VOCI as the dependent variable, DepDASS-21 was added in

stage one of the model and SAM in stage two. A summary of the regression results is presented in Table 3.

Table 3

Summary of Hierarchical Regression Analyses Predicting OC Symptoms (VOCI) from Depression (DepDASS-21) and Self-Ambivalence (SAM)

	B	SE B	β	ΔR^2	*F-change*
Step 1				.21	26.68^{***}
DepDASS –21	1.01	.20	$.45^{***}$		
Step 2				.03	4.13^{*}
DepDASS –21	.74	.23	$.33^{**}$		
SAM	.04	.02	$.21^{*}$		

Note. $N = 105$. DepDASS-21 = Depression subscale of DASS-21, SAM = Self-Ambivalence Measure, VOCI = VOCI total.

$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Table 3 shows, as predicted, that after controlling for the influence of depression, self-ambivalence significantly predicted OC symptoms, and explained an additional 3% of the variance in OC symptoms.

To examine the second hypothesis, that OC beliefs (OBQ-44) mediate the relationship of self-ambivalence to OC symptoms after controlling for depression, the three steps of mediational analyses were performed in accordance with guidelines of Frazier, Barron and Tix (2004). The first step requires that self-ambivalence (independent variable) significantly predicted OC symptoms (dependent variable). As per Table 3, this requirement was met. Secondly, after controlling for depression, self-ambivalence (independent variable) was required to significantly predict OC beliefs (mediator). Results from the regression equation indicated that, after controlling for depression, self-ambivalence only exhibited a non-significant tendency to predict OC beliefs ($\beta = .21$, $p = .06$, *F-change* = 3.74, $p = .06$).

A third regression equation was to examine if, after controlling for depression, the association between self-ambivalence (independent variable) and OC symptoms (dependent variable) reduced when OC beliefs (mediator) were added into the model. However, given the relationship between self-ambivalence and OC beliefs was not significant when depression was controlled, the third equation was not performed. Consequently, contrary to expectations, the relationship of self-ambivalence to OC symptoms was not mediated by OC beliefs, after controlling for the influence of depression.

The relationship of Self-Ambivalence in Moral Self-Worth to Obsessive-Compulsive Symptoms

A moderation analysis was conducted to test the third hypothesis, that self-ambivalence will moderate the relationship of moral self-worth (MoralCSWS) and OC symptoms. Thus an interaction term was computed by multiplying self-ambivalence and moral self-worth. Corresponding with Aiken and West (1991), the variables of the interaction were initially centred.

A hierarchical analysis was performed with VOCI as the dependent variable. DepDASS-21 was added in Step 1 of the regression in order to control its influence on VOCI. SAM was added in Step 2, MoralCSWS in Step 3 and the Interaction of the two variables (SAM x MoralCSWS) was added in Step 4. A summary of the regression results is shown in Table 4.

Table 4

Summary of Hierarchical Regression Analyses Predicting OC Symptoms (VOCI) from Depression (DepDASS-21), Self-Ambivalence (SAM), Moral Self-Worth (MoralCSWS) and Interaction (SAM x MoralCSWS)

	B	*SE B*	*β*	ΔR^2	*F-change*
Step 1				.21	26.68***
DepDASS-21	1.01	.20	.45***		
Step 2				.03	4.13*
DepDASS-21	.74	.23	.33**		
SAM	.04	.02	.21*		
Step 3				.00	.00
DepDASS-21	.74	.23	.33**		
SAM	.04	.02	.21*		
MoralCSWS	.02	.25	.01		
Step 4				.04	4.79*
DepDASS-21	.84	.24	.38***		
SAM	.04	.02	.21*		
MoralCSWS	-.08	.24	-.03		
SAM x MoralCSWS	.05	.02	.19*		

Note. $N = 105$. DepDASS-21 = Depression subscale of DASS-21, SAM = Self-Ambivalence Measure, MoralCSWS = Moral subscale of CSWS, Interaction = SAM x MoralCSWS , VOCI = VOCI total.
*$p<0.05$, **$p<0.01$, ***$p<0.001$.

As Table 4 shows, moral self-worth (MoralCSWS) was not a significant predictor of OC symptoms (VOCI). However the addidtion of interaction variable (SAM x MoralCSWS) at Step 4, was a significant predictor of OC symptoms. The interaction variable explained a further 4% of the variance in OC Symptoms. To further examine hypothesis three, that Self-Ambivalence would moderate the relationship of Moral Self-Worth and OC Symptoms, graphical representation of the interaction was undertaken. As recommended by Aiken and West (1991), the predicted scores for OC Symptoms were plotted at Low (-1 *SD* from mean), Average (mean) and High (+1 *SD* from mean) levels of Self-Ambivalence and Moral Self-Worth. Figure 1 demonstrates the interaction between Self-Ambivalence and Moral Self-Worth on OC Symptoms.

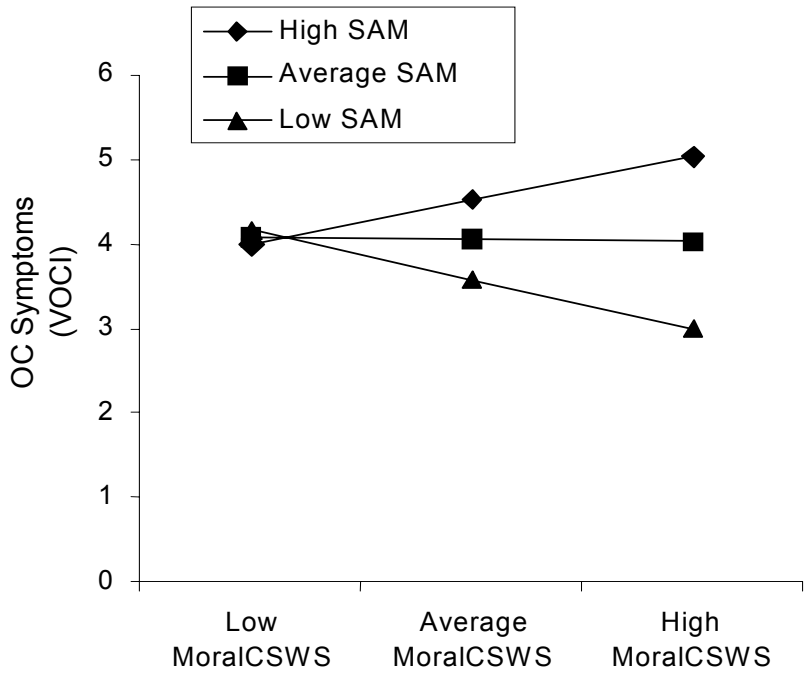

Figure 1

Interaction of Self-Ambivalence and Moral Self-Worth on OC Symptoms

Note. VOCI = VOCI total, MoralCSWS = Moral subscale of CSWS, SAM = Self-Ambivalence Measure.

Figure 1 shows, as predicted, moral self-worth is only positively related to OC symptoms when self-ambivalence is high. Interestingly, moral self-worth is negatively related to OC symptoms when self-ambivalence is low.

A one-way between groups Analysis of Variance (ANOVA) was performed to assess the difference that varying levels of self-

ambivalence have on OC symptoms, when at high levels of moral self-worth. Individuals were classified into groups of low (<1*SD* from mean), average (mean $\pm$ 1 *SD*) and high (>1*SD* from mean) levels of self-ambivalence and moral self-worth. As required for ANOVA, the assumptions of normality, independence of observations and homogeneity were met.

The current study was primarily interested in individuals who scored high on moral self-worth. When analysing individuals who scored high on moral self-worth, the one-way between groups ANOVA showed a significant difference in average OC Symptom scores for participants at different levels of Self-Ambivalence ($F(2,11) = 4.28$, $p < .05$, $\eta^2 = .44$). At high levels of moral self-worth, there were only non-significant differences in OC symptom scores (i.e., VOCI) reported by individuals with high ($M = 6.22$, $SD = .08$, $N = 2$) and average self-ambivalence levels ($M = 5.96$, $SD = 1.90$, $N = 10$). Post-Hoc Newman-Kuels tests, however, revealed that when compared with individuals with high self-ambivalence, individuals with low levels of self-ambivalence levels reported significantly lower ($p<0.05$) OC symptom scores ($M = 1.80$, $SD = 2.55$, $N = 2$).

Next, a series of regression analyses were performed to test the fourth hypothesis that, after controlling for depression, OC beliefs would mediate the relationship of the interaction variable (SAM x

MoralCSWS) on OC symptoms. Table 5 presents a summary of the three regression equations required for mediational analysis.

Table 5

Summary of Regression Equations for Mediational Analysis

	B	*SE B*	β	ΔR^2	*F-change*
Equation One Outcome – VOCI[a]				.04	4.80*
DepDASS-21	1.10	.20	.50***		
SAM x MoralCSWS	.05	.02	.19*		
Equation Two Outcome – OBQ-44[a]				.04	5.68*
DepDASS-21	16.14	3.20	.46***		
SAM x MoralCSWS	.84	.35	.22*		
Equation Three Outcome – VOCI[b]				.24	47.06***
DepDASS-21	.54	.18	.25**		
SAM x MoralCSWS	.02	.02	.08		
OBQ-44	.04	.01	.55***		

Note. $N = 105$. DepDASS-21 = Depression subscale of DASS-21, Interaction = SAM x MoralCSWS, SAM = Self-Ambivalence Measure, MoralCSWS = Moral subscale of CSWS, OBQ-44 = OBQ-44 total, VOCI = VOCI total.

[a] Data when SAM x MoralCSWS added into model [b]Data when OBQ-44 added into model

*$p < .05$, **$p < .01$, ***$p < .001$.

In line with the first two criteria of mediational analyses, Table 5 demonstrates that after controlling for depression (DepDASS-21), the interaction term (SAM x MoralCSWS) significantly predicted OC symptoms (VOCI) and OC beliefs (OBQ-44). Further, in the third regression equation, when OC Beliefs is added to the model, the relationship of the interaction term (SAM x MoralCSWS) to OC symptoms was no longer significant; thus, the three criteria for mediational analysis were met. Consequently, as predicted, the relationship of the interaction variable (SAM x MoralCSWS) to OC symptoms was mediated by OC beliefs. Given that the interaction ceased to be significant when OC beliefs was added to the model, OC beliefs can be seen to fully mediate the relationship. The significance of the mediation was examined as per the guidelines proposed by Baron and Kenny (1986), and a significant mediation was found (z = 23.43, p <0.05). Figure 2 gives a graphical description of the mediation model tested.

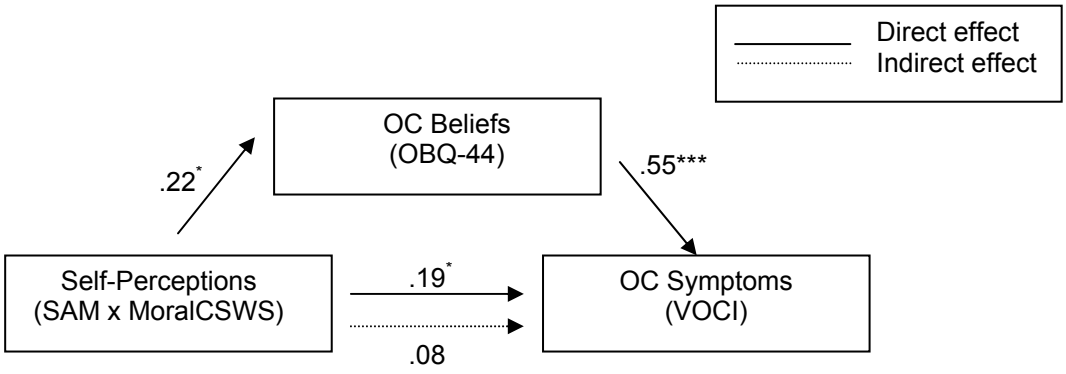

Figure 2.

OC Beliefs Mediating the relationship of Interaction term to OC Symptoms after controlling for Depression.

Note. Interaction Term = SAM x MoralCSWS, SAM = Self-Ambivalence Measure, MoralCSWS = Moral subscale of CSWS, OBQ-44 = OBQ-44 total, VOCI = VOCI total.

$^{*}p < .05$, $^{***}p < .001$.

Examination of Moral Intrusions

Finally a series of one-way between groups ANOVA were conducted to examine the fifth and sixth hypotheses, that individuals who report moral intrusions will tend to score significantly higher on self-ambivalence and moral self-worth than individuals who do not report moral intrusions. Additionally a series of analysis of covariance (ANCOVA), with depression as the covariate, were conducted to control for the possible confounding influence of depression.

As per Gordon (2002), for the purposes of the current study sexual and moral intrusions were collapsed into one category labelled moral intrusions. Corresponding with the requirements for ANOVA and ANCOVA, the assumptions of normality, homogeneity and independence of groups were met. Specific assumptions for ANCOVA, linearity of the covariate and homogeneity of regression slopes, were additionally met. A summary of the mean scores and standard deviations is provided in Table 6.

Table 6

Individuals with Moral Intrusions versus Individuals with out Moral Intrusions

	Moral Intrusions ($N = 26$)		No Moral Intrusions ($N = 78$)	
	M	*SD*	*M*	*SD*
DepDASS-21	2.28	1.08	1.89	.98
SAM	34.45	13.59	29.09	12.58
MoralCSWS	-3.18	.70	-3.22	.85

Note. DepDASS-21 = Depression subscale of DASS-21, SAM = Self-Ambivalence Measure, MoralCSWS = Moral subscale of CSWS.

$^{**}p<0.01$.

As Table 6 shows, individuals who experienced moral intrusions reported greater mean levels of depression than individuals

who did not experience these intrusions. A one-way between groups ANOVA showed that this difference only approached significance ($F(2,102) = 2.94$, $p = .06$). However, in light of the theoretically and empirically established relationship between depression and OC phenomena (Faull et al., 2004; Rachman & Sharfan, 1998) and self-ambivalence (Bhar, 2004), subsequent analyses controlled for the influence of depression.

A one-way between groups ANOVA showed a significant difference in the mean self-ambivalence level for different intrusion type ($F(2,102) = 4.32$, $p = .02$). Table 6 shows that, as predicted, individuals who experienced moral intrusions report greater mean levels of self-ambivalence than individuals who did not experience moral intrusions. A one-way between groups ANCOVA however, demonstrated that this difference was no longer significant after adjusting for depression scores ($F(2, 101) = 1.79$, $p = .17$). Contrary to expectations, individuals who experienced moral intrusions reported lower mean levels of moral self-worth than individuals who did not experience these intrusions. However, a one way between groups ANOVA revealed that this difference was not significant ($F(2,102) = .56$, $p = .57$). Hence, a one-way between groups ANCOVA that controlled for depression was not performed.

Discussion

The present study examined the relationship between an ambivalent self-worth, a self-worth based on high moral standards and obsessive-compulsive (OC) phenomena in a non-clinical student sample. Replicating the work of Bhar (2004; Bhar & Kyrios, 2000, 2006), the primary aim of the current study was to examine the relationship between self-ambivalence, dysfunctional beliefs and OC symptoms. In addition, the present study examined the notion, central to Guidano and Liotti's (1983) theory of self-ambivalence, that a self-worth contingent upon meeting moral standards (moral self-worth) is associated with OC phenomena. Consequently, a further aim of the current study was to extend on previous findings by Bhar and Kyrios (2000) and explore the combined influence that self-ambivalence and moral self-worth have on OC phenomena. A final aim of the current study was to expand upon the available literature to establish if intrusion content and appraisal processes are meaningfully related. Specifically, it was the intent of the present study to investigate whether self-ambivalence and moral self-worth were particularly relevant to intrusions with moral themes. Given that depressive symptoms are highly associated with OC phenomena (Faull et al., 2004; Rachman & Sharfan, 1998) and self-ambivalence (Bhar, 2004),

the current study determined that it was important to control for the confounding influence of depression.

As anticipated, the results of the present study support the role of self-ambivalence as a significant predictor of OC symptoms after controlling for depression. Contrary to expectations, however, the results did not support that dysfunctional beliefs mediate the relationship between self-ambivalence and OC symptoms, although they did fully mediate the relationship between specific ambivalence about moral worth and OC symptoms. After controlling for depression, self-ambivalence only exhibited a non-significant tendency to predict dysfunctional beliefs. The results of the present study also suggested that self-ambivalence moderated the relationship between moral self-worth and OC symptoms. Specifically, as predicted, moral self-worth was only positively related to OC symptoms when self-ambivalence was high. The present findings did not support the expectation that, after controlling for depression, individuals reporting moral intrusions would experience significantly higher levels of self-ambivalence or contingent moral self-worth when compared with individuals who did not experience moral intrusions.

The following paragraphs consider each hypothesis in detail. Limitations of the results of the present study are discussed and

suggestions for future research introduced. Finally, the overall implications of the current study's findings are explored.

Self-Ambivalence and OC Phenomena

Results of the current study support that after controlling for depression, self-ambivalence is related to the experience of OC symptoms. This is consistent with the findings of previous researchers (Bhar, 2004; Bhar & Kyrios, 2000) who interpreted such findings as supporting Guidano and Liotti's (1983) theory of self-ambivalence. According to Guidano and Liotti's model, individuals who are self-ambivalent hold contradictory views of self, develop uncertainty in their self-worth, and actively evaluate their thoughts and behaviour as evidence of their self-worth. Consequently, self-ambivalent individuals are purported to pay particular attention to their unwanted intrusions and perceive them as important. As per the cognitive theory of obsessive-compulsive disorder (OCD; Rachman, 1997; 1998), unwanted intrusions that are misinterpreted as personally significant lead to distress. To relieve this distress, the individual is provoked to respond to the intrusion, which in turn exacerbates the salience, frequency and intensity of intrusions so that they are more likely to develop into obsessions (Rachman, 1998). According to Guidano and Liotti's framework, obsessions threaten the valued self-view of self-

ambivalent individuals, which gives them mixed feelings. Consequently they endeavour to "prove" their self-worth and control any mixed feelings through neutralisation strategies, such as compulsions. Thus, Guidano and Liotti's theory is compatible with conventional cognitive theories, and goes some way towards explaining part of the underlying motivations for the development of OC symptoms.

In contrast to the findings of previous researchers (Bhar, 2004; Bhar & Kyrios, 2000), the results of the present study did not support that dysfunctional beliefs mediated the relationship between self-ambivalence and OC symptoms. Specifically, after controlling for the influence of depression, dysfunctional beliefs significantly predicted OC symptoms but self-ambivalence did not significantly predict dysfunctional OC beliefs. Given that Bhar and Kyrios (2000) used a similar undergraduate sample with comparable demographics, the present results might be attributable to two issues. Firstly, as Bhar and Kyrios (2000) used a larger sample size, the near significance of the present results may reflect a power issue. Alternatively, the present findings might be attributable to controlling for the influence of depression. While depression was found to exhibit a significant positive relationship with self-ambivalence and obsessive beliefs in

both the previous and present studies, Bhar and Kyrios (2000) failed to control for its effects.

From the cognitive literature on depression, there is much evidence to support that depression is associated with negative cognitions (Joiner & Rudd, 1996; Smith, Alloy & Abramson, 2006; Van der Does, 2005) and self-perceptions (Constantino, Wilson & Horowitz, 2006; Coyne, Gallo, Klinkman & Calarco, 1998; Erkolahti, Ilonen, Saarijarvi & Terho, 2003; Haugen & Lund, 2002). It is thus conceivable that depression could affect the self-perceptions and beliefs surrounding OCD, and the moderate correlation with self-ambivalence and OC belief measures goes some way to supporting this association. Indeed, there is emerging evidence on OCD that supports obsessional beliefs and depression are highly correlated (Faull et al., 2004; Muris et al., 2001; OCCWG, 2003, 2005). Thus, it seems plausible that depression may also dominate the relationship between self-concept and obsessive beliefs. For instance, individuals who are ambivalent about their self-worth may develop depressive symptoms as they experience helplessness in continually failing to manage their conflicting feelings. Consequently, the depression in these self-ambivalent individuals may be more influential in the generation of dysfunctional obsessive thinking, in turn leading to OC

symptomatology. Thus, self-ambivalence may act as a vulnerability for both depression and OCD symptoms.

Hence with respect to Guidano and Liotti's (1983) theoretical framework of self-ambivalence, the present results suggest the need to more fully incorporate the influence of depression in the model. Nonetheless the current findings do provide support for the primary proposal in Guidano and Liotti's theoretical framework; that there is a direct association between self-ambivalence and OC symptoms. Accordingly, it would appear that individuals who are ambivalent about their self-worth may not necessarily require the acquisition of dysfunctional beliefs as measured by the OBQ in order to develop OCD, but may still remain vulnerable to developing OC symptoms because intrusive thoughts directly threaten their idealised self-views. This contention is offered some support by the findings of Taylor et al. (2006) who reported that individuals with OCD do not necessarily report dysfunctional beliefs as measured by the OBQ.

Alternatively, given that the current study utilised the total score of the OBQ which includes three dysfunctional OC belief domains identified by the OCCWG (2003, 2005), it is possible that self-ambivalence has a stronger relationship with particular dysfunctional beliefs, and that this was clouded by the use of an aggregated score. For instance, Guidano and Liotti (1983) report that

self-ambivalent individuals attended to their thoughts as indicators of their self-worth. Thus, such individuals may be more vulnerable to the development of dysfunctional beliefs regarding the importance and control of thoughts, even in the context of depression. It might be useful for future research to examine the complex interrelationships between ambivalence and specific aspects of OC beliefs. Similarly, it is also important to examine specific aspects of self-ambivalence, especially in light of suggestions that the present measure of self-ambivalence was limited by its lack of focus on moral concerns that are highlighted in Guidano and Liotti's (1983) model.

Moral Self-Worth, Self-Ambivalence and OC Phenomena

In order to address the limitations of Bhar (2004) and Bhar and Kyrios (2000), and to further examine Guidano and Liotti's (1983) model, the present study investigated the importance that a self-worth contingent on meeting moral standards may add to the relationship between self-ambivalence and OC phenomena (OC beliefs and symptoms). The current findings demonstrated that both self-ambivalence and the interaction of self-ambivalence and moral self-worth significantly predicted OC symptoms. Specifically, as predicted, it was found that even after controlling for depression, self-ambivalence moderated the relationship between moral self-worth and

OC symptoms. Moral self-worth only had a positive relationship with OC symptoms when self-ambivalence was high. In line with Guidano and Liotti's theory of self-ambivalence, the results of the present study support that individuals who highly value moral mandates as important to their self-worth and concurrently felt generally ambivalent about their ability to adhere to these requirements, are likely to report experiencing greater OC symptoms. Guidano and Liotti (1983) suggest that this is because individuals who are ambivalent about their moral self-worth are constantly seeking verification of their moral standing in their thoughts and behaviour. Unwanted intrusions that threaten their moral self-worth are likely to be actively attended to, and thus more likely to become obsessions. In order to restore their moral self-worth, it is proposed that these individuals are likely to perform neutralisation strategies characteristic of OCD. These findings support those of Doron et al. (in press) who demonstrated that individuals 'sensitive' (i.e., placing importance but feeling incompetent) in their moral self-concept showed the largest obsessive belief and OC symptom scores.

It was also noted that it was not only high levels of self-ambivalence that had an influence on OC symptoms. According to the present results, at low levels of self-ambivalence, moral self-worth had a negative relationship with OC symptoms. It would appear that

individuals who highly value moral requirements as essential to their self-worth but who are not self-ambivalent, have a somewhat reduced likelihood of developing OC symptoms, at least within a normal control group. Thus, individuals who are not self-ambivalent and are more certain of their self-worth may not be motivated to act on intrusions. As a positive relationship between self-verification and self-efficacy has been demonstrated (Cast & Burke, 2002), it would be plausible to suggest that these individuals would be confident in their ability to meet personal demands important to their self-worth, and thus may not attend to their unwanted intrusions that challenge their idealised self-view. In line with the cognitive theory of OCD (Rachman, 1997), intrusions that are perceived as unimportant, do not provoke anxiety or distress and so the intrusions are normalised and unlikely to develop into obsessions.

Taken together, the current results add to the growing body of literature that suggests self-worth contingencies are a liability for the development of psychopathology when individuals are faced with threats to their valued domains (Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Crocker & Park, 2004; Crocker & Wolfe, 2001; Rudolph, Caldwell & Conley, 2005; Tangney, Wagner, Hill-Barlow, Marschall, & Gramazow, 1996). Specifically, in line with the findings of previous researchers (Rassin et al., 2000, O'Neil et al., 2005,

O'Neil, 1999), a self-worth contingent upon perceived moral abilities appears particularly relevant to individuals with OCD. It is important to note that on its own, moral self-worth was not an important component of vulnerability to OCD. In fact, the current results demonstrated that moral self-worth could not explain any of the variance in OC symptoms and that self-ambivalence was an integral determinant. Only when moral self-worth was coupled with self-ambivalence was it able to explain variability in OC symptoms. Thus, whether or not individuals hold a self-worth contingent upon moral standards only becomes an important factor in determining vulnerability to OCD when levels of self-ambivalence are considered.

As anticipated, the results of the current study suggest that after controlling for depression, obsessive beliefs fully mediated the relationship between ambivalence about moral self-worth and OC symptoms. While self-ambivalence on its own could not predict obsessive beliefs, the combined influence of self-ambivalence and moral self-worth did. It is important to note that this was a fully mediated relationship, so that individuals who are ambivalent about their moral self-worth only reported greater OC symptoms as a result of their obsessive beliefs. In accordance with Guidano and Liotti (1983), the findings suggest that individuals who are ambivalent about their moral self-worth are likely to develop dysfunctional obsessive

beliefs from their continual over evaluation of unwanted intrusions and responses to protect their moral self-worth. As a result, the current findings support that consideration of moral self-worth in the theory of self-ambivalence may be of relevance to the cognitive model of OCD, which incorporates obsessive beliefs as a precursor to OC symptoms (Purdon & Clark, 1993; Rachman, 1997, 1998; Salkovskis, 1985, 1989, 1999).

While self-ambivalence and ambivalence about moral self-worth contributed to the prediction of OC phenomena, depression was still the strongest predictor of OC symptoms in the present study. As discussed earlier, this may reflect the association between depression and negative cognitions (Joiner & Rudd, 1996; Smith et al., 2006; Van der Does, 2005). Alternatively, it may also reflect that the processes that characterise obsessions and compulsions overlap with those involved in depression. For instance, thought suppression has been implicated as an aetiological and maintaining factor in depression as well as OCD (Purdon, 1999). Numerous researchers have also indicated that depression relates more strongly to obsessive symptoms than compulsive symptoms (Arts, Hoocduin, Schaap & De Haan, 1993; Bhar & Kyrios, 2005; Ricciardi, 1995). So, to some extent, it is important that future research examines the relationship between self-perceptions, cognitions, affect and specific domains of OC symptoms.

Intrusions with Moral content, Self-Ambivalence and Moral Self-Worth

The present study examined differences between groups reporting different intrusion types. It was expected that those experiencing moral intrusions would report particular concerns about self-ambivalence and self-worth contingent on moral standards. When compared with individuals who did not experience moral intrusions, individuals who did report moral intrusions in fact scored higher on self-ambivalence. However, this difference no longer remained significant when the influence of depression was controlled. This finding suggests that the relationship between intrusions with moral themes and self-ambivalence involves depressive symptoms. It is possible that individuals with a tendency to be self-ambivalent may more readily appraise unwanted intrusions with moral content as a direct threat to moral self-worth. For these individuals, it is likely that the experience of moral intrusions relates to shame and, in the context of thought control strategies that are ineffective, helplessness and growing depressive symptomatology.

There was no significant difference in the present study between those with and without moral intrusions on self-worth contingent upon meeting moral standards. This may reflect that non-moral intrusions may still threaten one's sense of moral standing.

Even intrusions that are seemingly unrelated to morality (e.g., contamination concerns) can be interpreted as having moral overtones (e.g., concerns that one might contaminate others can easily be seen to have moral connotations).

Alternatively, the present results may reflect that intrusions with moral themes are not associated with moral self-worth independent of self-ambivalence. Previous research (Doron et al., in press), and the overall results of the current study suggest that individuals who are uncertain about their ability to adhere to their moral standards are likely to experience distress. Furthermore, the content of intrusive thoughts have previously been demonstrated to relate to current life stresses (Rowa et al., 2005). Given that the current study did not have adequate power, future research with a greater sample might examine if those with and without moral intrusions report differences in ambivalence about moral self-worth.

Overall, the present findings provide a first step to support that an individual's self-concept and personally significant domains (e.g., morality) are relevant to OCD, in addition to factors traditionally considered important (e.g., depression, OC beliefs) in cognitive models of OCD.

Implications

Results from the present study imply that an individual's self-concept may be an important determinant of cognitive vulnerability to OCD. Specifically, it has been proposed that unwanted intrusions that threaten an individual's self-worth are likely to be actively attended to and become the focus of biased appraisals. Accordingly, it would appear that the content of an intrusion is related to how it may be interpreted (Hallam & O'Connor, 2002). This proposal has direct theoretical implications for the cognitive model of OCD, which maintains that it is the appraisal, not the content of intrusions that determines if they become obsessions (Clark & Purdon, 1993, 1995; Purdon & Clark, 1993, 1994; Rachman, 1997, 1998; Salkovskis, 1985, 1989).

Of particular theoretical importance, the current findings also suggest a relationship between ambivalence about moral self-worth and the dysfunctional obsessive beliefs identified by the OCCWG. This finding may be seen as an important first step towards clarifying the current issues surrounding the cognitive theory of OCD, by highlighting a possible explanation for the development and maintenance of dysfunctional obsessive beliefs. In addition, the present study also provides some qualified support for the importance of the content of intrusions with respect to self-perceptions. While

participants reporting moral intrusions were particularly associated with greater self-ambivalence, this was not independent of depression. In addition, they did not report more concerns about their self-worth being contingent upon meeting moral standards. Finally, depression was also found to hold an important role in influencing the role of self-perceptions on OC phenomena. Overall, the findings highlight the complexity of interrelations between affective and cognitive factors in OCD.

Enhanced understanding of how and why particular intrusions become the focus of attention may translate to practical implications. Treatment of OCD may further benefit clients through incorporating assessment of an individual's self-ambivalence, sensitivity to particular types of intrusions and the beliefs associated with the appraisal of specific intrusions. In doing so the clinician can collaborate with the client to establish why they focus on the obsessions that they do. As proposed by Rowa and colleagues (Rowa et al., 2005; Rowa & Purdon, 2003), people may better understand their intrusions if they learn that they are not arbitrary, but noticeable because they violate one's self-worth. Furthermore, these additions are helpful because they aid clinicians to provide relapse prevention strategies that incorporate their client's personal vulnerabilities.

Limitations and directions for future research

A number of constraints of the present study have already been mentioned throughout. However, some additional limitations have been identified. Firstly, recruitment methods meant that the sample solely comprised undergraduate psychology students from Australia. Consequently, this limits the extent to which the findings can be generalised to other populations, particularly clinical populations. While the use of analogue samples is common in OCD research, and justified on the basis that intrusions and OC phenomena are similar in clinical and non-clinical populations (Gibbs, 1996), findings from analogue research still need to be replicated with clinical populations. It would also be useful for future research to replicate such findings with a more representative sample comprising individuals' from different age groups and educational levels.

Whilst OCD is recognised to be a largely heterogenous disorder (McKay et al., 2004), the current design did not reflect this. Thus, it is unknown whether ambivalence about moral self-worth varies in importance for different OC subtypes or dimensions. This is important because literature on obsessional subtypes suggests that obsessional presentations with moral themes are associated with covert compulsive behaviours (e.g., praying, counting) (Lee & Kwon, 2003; Lee et al., 2005). Thus, it would be appropriate for future

research to determine if individuals who are self-ambivalent are more likely to develop particular dysfunctional obsessive beliefs and OC symptoms.

Furthermore, the current study has not examined whether ambivalence about moral self-worth forms a specific vulnerability to OCD. Certainly depressive symptoms appear to be related to self-ambivalence, and previous research (Bhar, 2004) did not find differences between cohorts with OCD and other anxiety disorders on a self-ambivalence measure. Furthermore, self-uncertainty and ambivalence has been linked to a variety of psychological disorders, such as borderline personality disorder (Wilkinson-Ryan & Westen, 2000), social phobia (Wilson & Rapee, 2006) and bipolar disorder (Dalgleish & Power, 2004; Lambie & Marcel, 2002). Thus, future research will need to replicate such findings in a variety of clinical samples.

Finally, the present design was cross-sectional in nature. While vulnerability or causality is often implied by the interpretations made about the associations identified, causality cannot be established. Future research will to incorporate experimental designs or, at the very least, more complex structural modelling where alternative models can be compared.

Conclusion

The present study examined the relationship between self-perceptions and OC phenomena through a cognitive framework. Guidano and Liotti's (1983) theory of self-ambivalence was utilised as a useful model to explain why specific individuals are vulnerable to developing OCD. To extend the work of previous researchers (Bhar, 2004; Bhar & Kyrios, 2000; 2006), a self-worth contingent upon meeting high moral standards was incorporated in this study's analyses. The current results demonstrated that ambivalence about achieving one's moral demands may constitute a particular vulnerability to obsessive beliefs and OC symptoms, although future research will require experimental and more complex analytic strategies to establish causal associations. In line with the cognitive theory of OCD (Clark & Purdon, 1993, 1995; Purdon & Clark, 1993, 1994; Rachman, 1997, 1998; Salkovskis, 1985, 1989), the results indicated that the relationship between ambivalence about moral self-worth and OC symptoms is mediated by obsessive beliefs. The present study was additionally concerned with investigating if intrusions with moral themes were related to self-ambivalence or moral self-worth. The findings demonstrated that there may not be a relationship between intrusions with moral content and appraisal processes without incorporating the influence of depression. Throughout the present

study, the significance of depression has been highlighted, and it was proposed that greater acknowledgment of the impact of depression in theoretical models of OCD is required. Taken together, the current study highlights the importance for future research to investigate individuals' self-concept as an important vulnerability to OC phenomena.

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Appendix A: Questionnaire in full

DASS-21

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (e.g. in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down-hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

CSWS

People see themselves, their world and others in different ways. When indicating the degree of your agreement with these statements please think to what extent these statements describe the way you personally see others and yourself. There are no right or wrong answers, so try not to think too deliberately when filling in the questionnaire.

	Strongly Disagree			Neutral			Strongly Agree
1. Knowing that my family members love me makes me feel good about myself.	1	2	3	4	5	6	7
2. Doing better than others gives me a sense of self-respect.	1	2	3	4	5	6	7
3. Doing well in school gives me a sense of self-respect.	1	2	3	4	5	6	7
4. When I don't feel loved by my family, my self-esteem goes down.	1	2	3	4	5	6	7
5. Knowing that I am better than others on a task raises my self-esteem.	1	2	3	4	5	6	7
6. I don't care what other people think of me.	1	2	3	4	5	6	7
7. I can't respect myself if others don't respect me.	1	2	3	4	5	6	7
8. I feel worthwhile when I perform better than others on a task or skill.	1	2	3	4	5	6	7
9. My self-esteem does not depend on whether or not I feel attractive.	1	2	3	4	5	6	7
10. My self-esteem is unrelated to how I feel about the way my body looks.	1	2	3	4	5	6	7
11. When my family members are proud of me, my sense of self-worth increases.	1	2	3	4	5	6	7
12. I couldn't respect myself if I didn't live up to a moral code.	1	2	3	4	5	6	7
13. My self-worth is not influenced by the quality of my relationships with my family members.	1	2	3	4	5	6	7
14. My self-esteem is influenced by my academic performance.	1	2	3	4	5	6	7
15. My self-esteem would suffer if I did something unethical.	1	2	3	4	5	6	7
16. It is important to my self-respect that I have a family member that cares about me.	1	2	3	4	5	6	7
17. I feel better about myself when I know I'm doing well academically.	1	2	3	4	5	6	7
18. I feel worthwhile when I have God's love.	1	2	3	4	5	6	7
19. I feel bad about myself whenever my academic performance is lacking.	1	2	3	4	5	6	7
20. I don't care if other people have a negative opinion about me.	1	2	3	4	5	6	7
21. Whenever I follow my moral principles, my sense of self-respect gets a boost.	1	2	3	4	5	6	7
22. My self-worth is based on God's love.	1	2	3	4	5	6	7
23. My self-esteem is influenced by how attractive I think my face or facial features are.	1	2	3	4	5	6	7

24. My self-esteem depends on the opinions others hold of me.	1	2	3	4	5	6	7
25. When I think I look attractive, I feel good about myself.	1	2	3	4	5	6	7
26. My self-esteem would suffer if I didn't have God's love	1	2	3	4	5	6	7
27. My opinion of myself is tied to how well I do in school.	1	2	3	4	5	6	7
28. My self-esteem depends on whether or not I follow my moral/ethical principles.	1	2	3	4	5	6	7
29. My self-worth is influenced by how well I do on competitive tasks.	1	2	3	4	5	6	7
30. What others think of me has no effect on what I think about myself.	1	2	3	4	5	6	7
31. Doing something I know is wrong makes me lose self-respect.	1	2	3	4	5	6	7
32. My sense of self-worth suffers whenever I don't think I look good.	1	2	3	4	5	6	7
33. When I think that I'm disobeying God, I feel bad about myself.	1	2	3	4	5	6	7
34. My self-esteem goes up when I feel that God loves me.	1	2	3	4	5	6	7
35. My self-worth is affected by how well I do when I am competing with others.	1	2	3	4	5	6	7

SAM

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 myself	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 "decent" human being	0	1	2	3	4
18. When I am with other, 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

OBQ – 44

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, simply 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.

1	I think things around me are unsafe.	1	2	3	4	5	6	7
2	If I'm not absolutely sure, I'm bound to make a mistake.	1	2	3	4	5	6	7
3	Things should be perfect according to my own standards.	1	2	3	4	5	6	7
4	To be a worthwhile person, I must be perfect at everything I do.	1	2	3	4	5	6	7
5	When I see the opportunity to do so, I must prevent bad things from happening.	1	2	3	4	5	6	7
6	Even if harm is very unlikely, I should try and prevent it at any cost.	1	2	3	4	5	6	7
7	For me, have bad urges is as bad as actually carrying them out.	1	2	3	4	5	6	7
8	If I don't act when I foresee danger, then I am to blame for consequences.	1	2	3	4	5	6	7
9	If I can't do something perfectly, I shouldn't do it at all.	1	2	3	4	5	6	7
10	I must work to my full potential at all times.	1	2	3	4	5	6	7
11	It's essential for me to consider all possible outcomes of a situation.	1	2	3	4	5	6	7
12	Even minor mistakes mean a job is not complete.	1	2	3	4	5	6	7
13	If I have aggressive thoughts or impulses about my loved ones, this means I must secretly want to hurt them.	1	2	3	4	5	6	7
14	I must be certain of my decisions.	1	2	3	4	5	6	7
15	In all kinds of daily situations, failing to prevent harm is just as bad as	1	2	3	4	5	6	7

	deliberately causing it.							
16	Avoiding serious problems (for example, illness or accidents) requires constant effort on my part.	1	2	3	4	5	6	7
17	For me, not preventing harm is as bad as causing harm.	1	2	3	4	5	6	7
18	I should be upset if I make a mistake.	1	2	3	4	5	6	7
19	I should make sure others are protected from negative consequences of my decisions or actions.	1	2	3	4	5	6	7
20	For me, things are not right if they are not perfect	1	2	3	4	5	6	7
21	Having nasty thoughts means I'm a terrible person.	1	2	3	4	5	6	7
22	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
23	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
24	I should not have bizarre or disgusting thoughts.	1	2	3	4	5	6	7
25	For me, making a mistake is as bad as failing completely.	1	2	3	4	5	6	7
26	It is essential for everything to be clear cut, even minor matters.	1	2	3	4	5	6	7
27	Having a blasphemous thought is as sinful as committing a sacrilegious act.	1	2	3	4	5	6	7
28	I should be able to rid my mind of unwanted thoughts.	1	2	3	4	5	6	7
29	I am more likely than other people to accidentally cause harm to myself or to others.	1	2	3	4	5	6	7
30	Having a bad thought means that I am weird and abnormal.	1	2	3	4	5	6	7
31	I must be the best at things that are important to me.	1	2	3	4	5	6	7
32	Having an unwanted sexual thought or image means that I really want to do it.	1	2	3	4	5	6	7
33	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
34	Even when I am careful, I often think bad things will happen.	1	2	3	4	5	6	7
35	Having intrusive thoughts means I'm out of control.	1	2	3	4	5	6	7
36	Harmful events will happen unless I'm careful.	1	2	3	4	5	6	7
37	I must keep working until it's done exactly right.	1	2	3	4	5	6	7
38	Having violent thoughts means I will lose control and become violent.	1	2	3	4	5	6	7
39	To me, failing to prevent disaster is as bad as causing it.	1	2	3	4	5	6	7
40	If I don't do a job perfectly, people won't respect me.	1	2	3	4	5	6	7
41	Even ordinary experiences in my life are full of risk.	1	2	3	4	5	6	7
42	Having a bad thought is morally no different than doing a bad deed.	1	2	3	4	5	6	7
43	No matter what I do, it won't be good enough.	1	2	3	4	5	6	7
44	If I don't control my thoughts, I'll be punished.	1	2	3	4	5	6	7

VOCI

Please rate each statement by putting a circle around the
number that best describes how much the statement is true of you.
Please answer every item, without spending too much time on any particular item.

	How much is each of the Following statements true of you?	**Not at all**	**A little**	**Some**	**Much**	**Very Much**
1	I feel compelled to check letters over and over before mailing them.	0	1	2	3	4
2	I am often upset by my unwanted thought of using a sharp weapon.	0	1	2	3	4
3	I feel very dirty after touching money.	0	1	2	3	4
4	I find it very difficult to make even trivial decisions.	0	1	2	3	4
5	I feel compelled to be absolutely perfect.	0	1	2	3	4
6	I repeatedly experience the same unwanted thought or image about an accident.	0	1	2	3	4
7	I repeatedly check and recheck things like taps and switches after turning them off.	0	1	2	3	4
8	I use an excessive amount of disinfectants to keep my home or myself safe from germs.	0	1	2	3	4
9	I often feel compelled to memorise trivial things (e.g., licence plate numbers, instructions on labels).	0	1	2	3	4
10	I have trouble carrying out normal household activities because my home is	0	1	2	3	4

	so cluttered with things I have collected.					
11	After I have decided something, I usually worry about my decision for a long time.	0	1	2	3	4
12	I find that almost every day I am upset by unpleasant thoughts that come into my mind against my will.	0	1	2	3	4
13	I spend far too much time washing my hands.	0	1	2	3	4
14	I often have trouble getting things done because I try to do everything exactly right.	0	1	2	3	4
15	Touching the bottom of my shoes makes me very anxious.	0	1	2	3	4
16	I am often upset by my unwanted thoughts or images of sexual acts.	0	1	2	3	4
17	I become very anxious when I have to make even a minor decision.	0	1	2	3	4
18	I feel compelled to follow a very strict routine when doing ordinary things.	0	1	2	3	4
19	I feel upset if my furniture or other possessions are not always in exactly the same position.	0	1	2	3	4
20	I repeatedly check that my doors or windows are locked, even though I try to resist the urge to do so.	0	1	2	3	4
21	I find it very difficult to touch garbage or garbage bins.	0	1	2	3	4
22	I become very tense or upset when I think	0	1	2	3	4

	about throwing anything away.					
23	I am excessively concerned about germs and disease.	0	1	2	3	4
24	I am often very late because I can't get through ordinary tasks on time.	0	1	2	3	4
25	I avoid using public telephones because of possible contamination.	0	1	2	3	4
26	I am embarrassed to invite people to my home because it is full of piles of worthless things I have saved.	0	1	2	3	4
27	I repeatedly experience the same upsetting thought or image about death.	0	1	2	3	4
28	I am often upset by unwanted thoughts or images of blurting out obscenities or insults in public.	0	1	2	3	4
29	I worry far too much that I might upset other people.	0	1	2	3	4
30	I am often frightened to unwanted urges to drive or run into oncoming traffic.	0	1	2	3	4
31	I almost always count when doing a routine task.	0	1	2	3	4
32	I feel very contaminated if I touch an animal.	0	1	2	3	4
33	One of my major problems is repeated checking.	0	1	2	3	4
34	I often experience upsetting and unwanted thoughts about losing control.	0	1	2	3	4
35	I find it almost impossible to decide what	0	1	2	3	4

	to keep and what to throw away.					
36	I am strongly compelled to count things.	0	1	2	3	4
37	I repeatedly check that my stove is turned off, even though I resist the urge to do so.	0	1	2	3	4
38	I get very upset if I cant complete my bedtime routine in exactly the same way every night.	0	1	2	3	4
39	I am very afraid of having even slight contact with bodily secretions (blood, sweat, urine, etc.)	0	1	2	3	4
40	I am often very upset by my unwanted impulses to harm other people.	0	1	2	3	4
41	I spend a lot of time every day checking things over and over again.	0	1	2	3	4
42	I have great trouble throwing anything away because I am very afraid of being wasteful.	0	1	2	3	4
43	I frequently have to check things like switches, faucets, appliances and doors several times.	0	1	2	3	4
44	One of my major problems is that I am excessively concerned about cleanliness.	0	1	2	3	4
45	I feel compelled to far too many things like old magazines, newspapers, and receipts because I am afraid I might need them in the future.	0	1	2	3	4
46	I repeatedly experience upsetting and unacceptable thoughts of a religious	0	1	2	3	4

	nature.					
47	I tend to get behind in my work because I repeat the same thing over and over again.	0	1	2	3	4
48	I try to put off making decisions because I am so afraid of making a mistake.	0	1	2	3	4
49	I often experience upsetting and unwanted thoughts about illness.	0	1	2	3	4
50	I am afraid to use even well-kept public toilets because I am so concerned about germs.	0	1	2	3	4
51	Although I try to resist, I feel compelled to collect a large quantity of things I never actually use.	0	1	2	3	4
52	I repeatedly experience upsetting and unwanted immoral thoughts.	0	1	2	3	4
53	One of my major problems is that I pay far too much attention to detail.	0	1	2	3	4
54	I am often upset by unwanted urges to harm myself.	0	1	2	3	4
55	I spend far too long getting ready to leave home each day because I have to do everything exactly right.	0	1	2	3	4

THE INTERNATIONAL INTRUSIVE THOUGHTS INTERVIEW SCHEDULE

Instructions to Interviewers*:* The purpose of this interview is to obtain information on individuals' experience of unwanted intrusive thoughts, images and impulses that might have relevance for understanding the origins of obsessive-compulsive disorder (OCD). A separate interview schedule should be completed on each new research participant and the interview schedule should be given before the participant completes any other questionnaires. This is a semi-structured interview so researchers are free to ask participants additional questions for clarification in order to complete the ratings. Also the researcher is to record the participant's answers and to make the requested ratings based on the participant's responses. Participants should be given the "Participant Rating Scales" so they can follow along with the interviewer, and suggest the rating scale number that should be recorded by the interview.

Please note that the interview focuses primarily on intrusions that have occurred in the last 3 months. That is, participants are encouraged to report on intrusions that occurred more recently, especially during the last three months. Choose a date that is three months from the current interview date and use that as your time interval with participants (e.g., "… between the first of October and now, have you had any intrusive thoughts of …."). PLEASE COMPLETE SECTIONS A THROUGH K IN THE ORDER THAT THEY APPEAR IN THE INTERVIEW SCHEDULE.

Interviewer reads to participant*:* This research project is part of an international study on unwanted intrusive thoughts in university students from various countries around the world. Over the next 45 - 60 minutes, I am going to ask you some questions about whether, during the past three months, you have experienced six types of unwanted intrusive thoughts, images or impulses that pop into your mind without too much effort on your part. I will be asking about whether you have experienced unwanted thoughts of contamination/illness, harm/injury/aggression, doubt, sex, religion or being a victim of aggression. We know from research as well as clinical and personal experiences that the vast majority of people (over 80%) have many different types of unwanted intrusive thoughts and these thoughts can be quite distressing at times. Because unwanted intrusive thoughts are so common, we are interested in learning more about the nature of this thinking, how people respond to the thoughts

and how they try to control their unwanted mental intrusions. So we will be asking you questions about the frequency of these thoughts, what types of intrusive thoughts you might experience, whether the thoughts are meaningful or significant for you, and how you might try to control them. I will begin by asking you some general questions about yourself. After we have completed the interview on intrusive thoughts I have just a couple of questionnaires I would like you to complete. The whole process should take approximately one hour.

Do you have any questions? Do you want to proceed with the interview? Remember you are free not to answer any question and you can withdraw your participation in the interview at any time.

A. INTERVIEW INFORMATION

1. Name of Interviewer: _____
2. Date of Interview: _____
3. Location of Interview (city & country): _____

B. PARTICIPANT DEMOGRAPHIC INFORMATION

4. Subject Code (generated by researcher): _____
5. Gender: MALE FEMALE (circle one)
6. Age: _____ (years)
7. What is your ethnic identity? (Interviewer: record the participant's self-described ethnicity);
   _____
8. How long have you lived in your country? _____
9. Years of Education: _____
10. Present Relationship Status (never married, married, divorced or widowed, living together):_____

C. PARTICIPANT MEDICAL & PSYCHIATRIC HISTORY

11. Do you consider yourself to be in good health? **YESNO**

    If "no", list any illnesses or diseases that indicate a health problem: _____
12. How long have you had each of the illnesses or diseases listed in question #16? _____

13. Do you take any medication for the illnesses or diseases listed in question #16? (write down current medications):

    _____

14. Do you currently have a mental health problem that led you to obtain professional advice or help?

    YES **NO**

    If "yes", list current mental health problems: _____

15. How long have been diagnosed with each of these mental health problems and what professional made the diagnosis (e.g., psychiatrist, psychologist, family doctor, nurse)?

    _____

16. What treatment (e.g., medication, psychological treatment, counselling) have you taken for this mental health problem?

    _____

17. How would you rate the current status of the mental health problem?

(0) NO LONGER PRESENT
(1) MUCH IMPROVED
(2) NO CHANGE
(3) MUCH WORSE
(4) WORSE IT'S EVER BEEN

18. Have you seen, hear or experienced any acts of terrorism, violence or aggression in the past 12 months that were life-threatening to you or someone close to you?

YES	**NO**

    If "YES", please describe the incident(s):

    _____

    _____

D. DEINITION AND EXAMPLES OF UNWANTED INTRUSIVE THOUGHTS *(UITs)*

Interviewer reads to participant: During the past three months have you had specific thoughts, images or feelings that very suddenly pop into your mind and they immediately grab your

attention? You may be doing something or thinking about something but your attention is immediately drawn to this intrusive thought. You don't really want to have these thoughts and you may try hard to ignore the thought, but it keeps coming back. These unwanted intrusive thoughts can be about minor or trivial things (e.g., like a song that you can't stop thinking about) or they can be about very disturbing even emotionally upsetting things (e.g., did I just run over that pedestrian with my car?). Very often unwanted intrusive thoughts deal with losing control and doing something you would never want to do (e.g., for no reason stabbing a stranger with a knife). As mentioned previously this type of thinking is very common, with the vast majority of people reporting fairly frequent unwanted intrusive thoughts of a negative, frightening, sometimes even bizarre nature. The following are some examples of unwanted intrusive thoughts:

- the thought of whether you might have become contaminated after touching an object
- doubts about whether or not you locked the door when you left your apartment (house)
- an impulse to suddenly say something rude or embarrassing that would draw attention to yourself
- thoughts of suddenly verbally or physically attacking someone for no good reason
- the thought that you might have been careless or made a mistake that would cause terrible things to happen to you or to other people
- thoughts of engaging in sex that is against your morals or might even disgust you
- thoughts of causing an accident or injury to someone like running over them with a car
- a trivial thought like a saying or song that keeps coming back to you over and over again

So I am now going to ask you about your experience of unwanted intrusive thoughts over the past three months.

UNWANTED RELIGIOUS INTRUSIONS

1. **Interviewer reads to participant:** In the last three months, have you had unwanted intrusive thoughts, images or impulses where you suddenly had a thought, image or impulse that you felt was

VERY WRONG OR SINFUL. That is, the thought, image or impulse involved something that was a VIOLATION OF YOUR MORAL OR RELIGIOUS BELIEFS." For example it could be the thought, image or impulse of doing something you consider sinful or it could be doubts about something that is important to your faith like whether you confessed a sin, completely purified yourself, said the right prayer, entirely trusted in God, etc. It could also be the sudden intrusion of blasphemous thoughts or swear words against God. It is not uncommon for people who are religious, spiritually minded or highly moral to have these types of intrusions.

Interviewer instruction: It is important that you obtain enough information about the religious intrusive thought or doubt so that you can make a judgment that the thought really was a UIT. To qualify as a UIT, the religious thought, image or impulse should be clearly excessive, irrational, or a violation of the person's religious and/or moral code. Often religious intrusions take the form of persistent doubts in which people question whether they have sinned, are they right with God, did they confess all their sins, are they perfectly clean before saying prayers, etc. The religious intrusion can take the form of sudden blasphemous thoughts. Religious intrusions often involve themes of sex or harm and aggression. If the intrusive thought overlaps with sex or harm/aggression, code it a religious intrusion only if the person considers the most disturbing aspect of the intrusion is that it violates their religious beliefs. If violation of religious beliefs seems like a secondary consideration, then the intrusion should be categorized under the sex or harm/aggression category.

It is entirely possible that a participant can not report an unwanted negative religious intrusion, even after sufficient probing. For these individuals, circle "No" and skip questions 95 to 118 and proceed to the next section on "sexual intrusions".

YES	**NO**

Ask the participant for an example of an unwanted distressing religious intrusive thought or impulse. Make sure that the example fits with the definition of an unwanted intrusive thought. Record example here:

_____

_____

_____

_____

UNWANTED SEXUAL INTRUSIONS

2. **Interviewer reads to participant:** In the last three months, have you had unwanted intrusive thoughts, images or impulses where you suddenly thought of SOMETHING SEXUAL THAT WAS UNPLEASANT, MAYBE EVEN DISGUSTING TO YOU?" For example it may be an intrusive thought of being intimate (kissing) or having sex with someone you find physically repulsive, or it may be the thought or image of engaging in a sexual act that you find disgusting or immoral. Remember these are unwanted sexual thoughts that just pop into your mind against your will, not pleasurable or wanted sexual thoughts or fantasies. It is not uncommon for people with strong moral standards about sexual matters to have these types of intrusions.

   Interviewer instructions: *It is important that you obtain enough information about the sexual intrusive thought or impulse so that you can make a judgment that the thought really was a UIT. To qualify as a UIT, the sexual thought, image or impulse should be clearly excessive, irrational, or uncharacteristic given the participant's personality, values, or life circumstance. It will be important not to confuse sexual fantasies with sexual intrusions. Sexual fantasies are thoughts or images that the person finds desirable and pleasurable (e.g., "engaging in sexual behavior with a physically attractive person", "having a sudden erotic fantasy"). Unwanted sexual intrusions are more negative and are considered by the participant quite unacceptable, possibly even disgusting (e.g., "engaging in sexual activity with a person you find disgusting", "engaging in sexuality activity that you find repugnant or that is illegal like children or animals", or "having sexual thoughts that are contrary to your sexual orientation that you find disturbing").*

   It is entirely possible that a participant can not report an unwanted negative sexual intrusion, even after sufficient probing. For these individuals, circle "No" and skip questions 120 to 144 and proceed to the next section on "victim of violence intrusions.

YES	NO

   Ask the participant for an example of an unwanted negative sexual intrusive thought or impulse. Make sure that the example fits with the definition of an unwanted intrusive thought. Record example here:

   _____