

**ATTACHMENT SECURITY, SELF-CONCEPT CLARITY
AND BELIEFS IN OBSESSIVE-COMPULSIVE
DISORDER**

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Volume 1 of 3

**Submitted to the University of Hertfordshire in partial
fulfilment of the requirements of the degree of Doctor of
Clinical Psychology**

2007

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**DISCUSS THE ROLE OF THE THERAPEUTIC RELATIONSHIP IN
EFFECTING CHANGE WITH CLIENTS. COMPARE AND CONTRAST
TWO THEORETICAL ORIENTATIONS.**

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JANUARY 2005

YEAR 1

WORD COUNT: 4994

Introduction

Research has shown that different types of therapy have similar success rates, regardless of the theoretical underpinnings (Smith & Glass, 1977). For example, short-term psychodynamic psychotherapy and cognitive behaviour therapy are equally effective in treating depression (see Leichsenring, 2001 for a review). This has led to the suggestion that the therapeutic relationship, which is common to all one-to one therapy, maybe an important factor in influencing outcome (Howe, 1999). This highlights the need for clinical theory, practice and research to address the issue of the therapeutic relationship and how it's role in facilitating favourable outcomes can best be used.

To provide an in-depth analysis of this issue, this essay will focus on two orientations that are based on different theoretical underpinnings, cognitive and psychoanalytic. How these two perspectives conceptualise and use the therapeutic relationship will first be discussed. Relevant research within this area will then be presented. Following this, an analysis of how the two viewpoints differ, and what similarities they share will be discussed. Finally, conclusions will be made regarding the role of the therapeutic relationship across cognitive and psychodynamic orientations, including consideration of implications for clinical practice and research, as well as possible directions for the future.

The essay will only be considering one-to one therapy and not group or family therapy, as this has been the main focus within the empirical literature. In addition, 'psychodynamic therapy' as the term is used in this essay will denote the range of psychological interventions that draw on psychoanalytic theory (Fonagy, 1998). This includes psychoanalysis and short term psychodynamic psychotherapy.

The concept of 'therapeutic relationship' or 'alliance' has many definitions that depend on which theoretical orientation is subscribed to. However, for the purposes of this essay, the term 'therapeutic relationship' and 'therapeutic alliance' will be used interchangeably to denote the collaborative and affective bond between therapist and patient, as well as the patient's and therapist's ability to agree on treatment goals and

tasks. This reflects the three main themes of most theoretical definitions of the therapeutic alliance (Martin, *et al.*, 2000).

Therapeutic change is viewed differently from cognitive and psychoanalytic standpoints. In cognitive behaviour therapy the focus of treatment is to change clients' maladaptive cognitions and behaviours associated with the presenting problem (Beck, *et al.*, 1979). In psychodynamic psychotherapy, the basic aim of treatment is to make the unconscious conscious, to create meaning where there is anxiety or confusion (Mander, 2000). The overarching premise of these two views is that change constitutes an alleviation of the problem(s) the client came to therapy with. Thus for the purposes of this essay 'change' will be defined as a reduction in symptoms.

Psychoanalytic conceptualisation of the therapeutic relationship

The emotional relationship between therapist and client together with interpretation and insight are seen as the main vehicles of change within psychodynamic therapy. (Bateman & Holmes, 1995). Interpretation is a technique that 'links the conscious and unconscious determinants of an experience, act or symptom' (Bateman, *et al.*, 2000, p. 74). Through the re-experiencing of disturbing early experiences in the therapeutic relationship, or more specifically, in the transference, unconscious motives, anxieties and defences are identified and understood (Bateman *et al.*, 2000). This insight is considered the hallmark of change in psychodynamic work (Bateman *et al.*, 2000). Within the therapeutic relationship the transference and countertransference, two key processes that are argued to occur in all human relationships, are used therapeutically to enable understanding of the client's inner world (Bateman *et al.*, 2000).

Transference

Transference can be defined as 'the tendency to repeat, in a current setting, attitudes, feelings, impulses, and desires experienced or generated in early life in relation to important figures in the individual's development' (Stone, 1995, p. 110). Breuer and Freud (1895/1955) first introduced the concept of transference and initially viewed it as a hindrance to treatment. However, Freud later recognised this phenomena could

assist the therapy, and described it as treatment's 'best tool' to enable understanding of the patient's emotional difficulties (Freud, 1917/1973, p. 496).

Since Freud's initial ideas on transference there has been many different revisions and developments on the topic. Classical viewpoints see transference as being based on actual past experiences (Fonagy, 1998). Transference is thus a distortion of reality, or the actual relationship, in that a psychic displacement of the past is projected onto a present relationship (Bateman & Holmes, 1995). Clients may experience feelings towards the therapist as if he/she were a significant figure from the past. This transfer of feelings can then be used to investigate the past and gain greater understanding of the client's difficulties, through interpretation of the transference (Bateman *et al.*, 2000). By contrast, more contemporary perspectives view transference and the therapeutic relationship as mutually evolving (Bateman *et al.*, 2000). For example, (Slavin & Kreigman, 1992 as cited in Bateman & Holmes, 1995) argue transference represents the use of learned experience in new situations so that a revision of past experience can take place, thus transference is an 'earlier version' rather than a distortion of present experience.

Countertransference

Countertransference can be defined as:

the thoughts and feelings experienced by the analyst which are relevant to the patient's internal world and which may be used by the analyst to understand the meaning of his patient's communications to help rather than hinder treatment (Bateman & Holmes, 1995, p 109-110).

Freud (1910/1957) viewed countertransference reactions as obstacles to therapy and advocated personal analysis in order to overcome. Heimann (1950) first argued the therapist's countertransference reactions could be used to understand the client's unconscious processes. Winnicott (1949) also added to the changing view of countertransference. He emphasised the importance of negative countertransference

feelings, such as hate, when working with 'disturbed' patients and argued that recognition of these feelings was an essential part of the treatment (Winnicott, 1949).

In contrast to Freud, who viewed countertransference as the analyst's resistance, Heimann (1950) used the term to cover all the feelings the therapist experienced towards the client. She further developed the concept by arguing countertransference is not just part of the therapeutic relationship, but is also the client's creation (Heimann, 1950). Therefore a therapist's feelings in the therapeutic setting are not so much a manifestation of their subjective experience, but represent projected aspects of the client's mind (Jacobs, 1999). These ideas served to make countertransference a principal tool in therapy based on the understanding that a relationship existed between client and therapist (Hinshelwood, 1999).

A concept that is related to the notion of countertransference is projective identification. In her work with children, Klein (1946/1986) initially described projective identification as a phantasy in which bad parts of the (infant) self were split off and projected into the mother, which resulted in a feeling that the mother had become the bad part of the self and was then responded to accordingly. Thus in its original form, projective identification was viewed as defensive and not involving the participation of the other (Bateman & Holmes, 1995). Further development of the concept has recognised that it is a mutual interactive process that impacts on the recipient in two ways.

First, the recipient, or therapist, may feel or act in such a way that originates with the client, explaining the mechanism of what Heimann (1950) was describing in her paper. Second, through interpersonal interaction the recipient is pressured to enact the feelings that are being projected into him, or to perform the role of the client's transference figure (Hinshelwood, 1999). Bion's (1962) model of the container and the contained is useful here. He emphasised the importance of the recipient of the projection being able to 'digest' or 'metabolise' the projected parts, and then returning them to the recipient in a more acceptable form (Bateman & Holmes, 1995). Clinically this implies the therapist must be able to accept the client's projections,

contain them without acting on the feelings and offer them back to the client through the means of interpretation.

In summary, the role of the relationship in psychoanalytic psychotherapy is of utmost importance. Transference and countertransference processes that occur within this relationship are used as a therapeutic tool as a way of connecting with the client's inner world and to bring about change.

Cognitive conceptualisation of the therapeutic relationship

The way in which cognitive therapy has viewed the role of the therapeutic relationship in producing change has shifted over the years. Traditionally, the therapeutic relationship was seen as a by-product of the therapeutic process (Giovazolias, 2004) and little attention was paid to it. Beck *et al.* (1979) argued that a good relationship was 'sufficient but not necessary' for change in clients (p.45). Cognitive change came about by applying specific techniques within the context of a 'therapeutic collaboration' (Beck *et al.*, 1979).

Beck *et al.* (1979) argue that therapist characteristics of warmth, empathy and genuineness are important when applying cognitive techniques. Basic trust and rapport are seen as essential in providing a collaborative environment in which therapist and client became a 'team'. Collaborative empiricism, as this is termed, has important implications for clinical practice in that the relationship is reciprocal, with both therapist and client working together in an investigative way (Sanders & Wills, 1999).

Traditional cognitive therapy has been criticised for the 'mechanistic' way in which it views the therapeutic relationship (Corrie, 2004). Difficulties in the therapeutic relationship were seen as problems to be solved. A criticism of this is that the therapy misses vital information regarding the clients difficulties including their ways of relating to others, which could be used to promote psychological change (Sanders & Wills, 1999). As cognitive therapy has developed there has been an increasing interest in the role of therapeutic relationship in producing change. This has been driven in

part by the increasing use of cognitive therapy with people who have more complex problems. For example, personality disordered clients' core difficulties are interpersonal relationships (Giovazolias, 2004). Work with such clients led to the recognition that the role of the therapeutic relationship was important (Beck, *et al.*, 1990). It was argued transference reactions could provide further information regarding the client's underlying beliefs and assumptions, and ignoring these could interfere with the collaboration (Beck *et al.*, 1990).

The development of schema therapy within the cognitive domain views the therapeutic relationship as a vital component of change. A schema is defined as a 'broad organising principle for making sense of one's life experience' (Young, *et al.*, 2003, p. 7). Schema therapy attempts to help clients identify their schemas, understand their origins in childhood and relate them to the problems they are experiencing. The therapeutic relationship is central to this and is used in two ways. First, to empathise with the client and confront schemas as they are activated in the session, a process called empathic confrontation. Second, to allow limited reparenting to take place or, to provide the client with a 'corrective emotional experience' (Alexander & French, 1946 as cited in Young, *et al.*, 2003). The therapist acts in a consistent way towards the client that offers an 'antidote' to the clients early deficient parenting experience (Young *et al.*, 2003).

Safran (1990a) has further developed cognitive theory by utilising interpersonal theory and the concept of the schema. He argues that interpersonal schemas, defined as generic representations of self-other relationships, are developed in childhood through interactions with care givers and guide the maintenance of interpersonal relatedness throughout life (Safran, 1990a). These interpersonal schemas drive cognitive-interpersonal cycles, in which maladaptive expectations and dysfunctional behaviours become activated and subsequently reinforced. Interpersonal behaviours produce an interpersonal 'pull' in others that allows for schema-consistent responses which in turn reinforce the behaviours (Corrie, 2004). Safran (1990b) emphasises becoming a 'participant observer' so to avoid becoming entangled with the client's dysfunctional cognitive-interpersonal cycle, and using the therapist's

countertransference reactions to identify problematic behaviours and communications that can be explored further. Attending to alliance ‘ruptures’ or difficulties in the therapeutic relationship is seen as essential, as these can lead to valuable information regarding the client’s interpersonal schemas and cognitive-interpersonal cycles (Safran & Segal, 1990).

Therefore most contemporary cognitive orientated therapists would argue, to varying degrees, the therapeutic relationship is important in effecting change with clients. However, a new type of computer based treatment has emerged that challenges this view. Computer-based cognitive behavioural therapy (CCBT) packages have been developed to treat problems such as depression, anxiety, phobias and panic. A review of sixteen research studies concluded although some evidence exists that CCBT may be as effective as therapist-led cognitive behaviour therapy, but the evidence was not conclusive (Kaltenthaler, *et al.*, 2004). A National Institute of Clinical Excellence (NICE) final appraisal determination came to similar conclusions, highlighting CCBT may be of value but as yet the evidence base is insufficient to recommend general introduction into the NHS (NICE, 2004b).

In summary, apart from schema therapy, cognitive therapy has typically viewed the therapeutic relationship as important, but has not used it as a mechanism for change. Developments in theory are now taking the interpersonal aspects of the relationship into account, which has produced a resurgence of interest in the relationship as a possible means for facilitating change.

Research into the therapeutic relationship

Horvath and Symonds (1991) conducted a meta-analysis of 24 studies carried out over an 11-year period that looked at the relationship between alliance and outcome. Their inclusion criteria included studies that had a quantifiable measure of the relationship between the alliance and assessment of outcome, studies that had five or more participants, and only studies that investigated individual treatment. They found a ‘moderate but reliable’ overall effect size of .26 between quality of alliance and

outcome (Horvath & Symonds, 1991, p.2). The results also showed no significant difference in the relationship between alliance and outcome for individual types of treatments. However, only two studies utilised cognitive therapy, the majority used psychodynamic and 'eclectic'. It was not made explicit which types of therapeutic orientations were drawn upon within the eclectic group, or which type of problems clients included in the studies had.

Martin *et al.* (2000) using Horvath and Symonds' (1991) inclusion criteria found 60 additional studies and conducted a further meta-analysis. They found a 'moderate but consistent' overall effect size of .22 between positive outcome and good alliance, and replicated the finding that this relationship is not affected by type of treatment, which in this meta analysis was behavioural, cognitive or psychodynamic (Martin *et al.*, 2000, p.2). Whether type of diagnosis had an impact on the alliance-outcome relationship was not investigated.

A factor to consider when interpreting the results of these meta-analyses is that the alliance measures that were used may be based on different definitions of the alliance itself (Catty, 2004). Horvath and Luborsky (1993) conducted a review of the research literature and found that overlap does exist between measures, indicating each measure is assessing a similar process. However, each measure reflected different underlying theoretical conceptualisations of the alliance. For example, The Penn Scales are derived from the psychodynamic conceptualisation of the alliance, The Vanderbilt scales are based on dynamic and integrative theories (Horvath & Luborsky, 1993). It is also argued that researchers tend to choose the alliance measure that best represents the theoretical orientation of the treatment upon which the study is based (Horvath, 2000).

Andrusyna *et al.* (2001) conducted an interesting study looking at the specific factor structure of the therapeutic alliance. Using data from a previous study (Jacobson, *et al.*, 1996) the shortened, observer rating version of the Working Alliance Inventory (Tichenor & Hill, 1989; as cited in Andrusyna, *et al.*, 2001) was completed for audiotapes of the second sessions of cognitive behaviour therapy for 70 participants.

Factor analysis found that the alliance had a factor structure consisting of two independent factors, agreement/confidence and relationship. This suggests that the therapeutic relationship may be independent of the client's agreement with and confidence in the therapist and cognitive behaviour therapy. An important implication of this is previous studies may have been mistaken in using a measure that assumes a general alliance factor rather than two distinct factors.

In light of the difficulties with alliance measures and the methodological limitations of the research that uses them, caution must be taken when interpreting the results. Nevertheless, the research has been taken as evidence that the relationship could be curative in itself, and that there are elements of the therapeutic relationship that are common to most, if not all, therapies (Howe, 1999). However, although a relationship has been found between alliance and outcome, no cause or effect can be attributed. In addition, this relationship has been moderate not strong. It could be argued that if in fact the therapeutic relationship was curative in itself, regardless of therapeutic orientation, a stronger relationship would be observed.

The research presented so far assumes the therapists' techniques within specific treatment types are similar, if not the same. This may be true if the treatments were being read out of a manual, but therapy involves a complex interpersonal interaction between therapist and client under an umbrella of specific treatment type. This has led researchers to generate more complex research questions, and is now examining the nature of this relationship. For example, it is possible that certain variables have either a mediating or a moderating effect on the alliance-outcome relationship. A moderator is defined as a variable that 'affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable' (Baron & Kenny, 1986, p. 3). A mediator is defined as a variable that 'accounts for the relation between the predictor and the criterion' (Baron & Kenny, 1986, p.7). These variables can be divided into client, therapist or treatment-specific.

Trepka *et al.* (2004) examined whether therapist competence could influence the alliance-outcome relationship. Thirty NHS patients received between 12 and 20

sessions of cognitive therapy. Choosing one audiotaped session for each client at random, therapist competence and therapeutic alliance was assessed. The results showed the expected alliance-outcome relationship but interestingly revealed that therapist competency was also associated with outcome. However, this association was no longer significant when alliance was added to the analysis. Trepka *et al.* (2004) argue this finding reflects the modest power of the study, highlighting that this association was only slightly weakened when alliance was taken into account. The limitation of the study that both outcome and alliance were measured from the client's perspective, and competency was only measured from one independent rater may have contributed to these results. Trepka *et al.* (2004) propose therapist competence could be a variable that is independent of and additive to that of the therapeutic alliance.

Research has examined the role of client-specific factors in affecting the alliance-outcome relationship. Horvath (1991; as cited in Horvath, 1993) reviewed 11 studies investigating the impact of client-therapist characteristics and found that clients who had difficulty in maintaining social relationships, or who had poor relationships with their families were less likely to develop strong alliances. Hardy *et al.* (2001) treated 24 clients with at least 12 sessions of cognitive therapy. They found an under-involved interpersonal style predicted outcome and was mediated through the therapeutic alliance. Thus evidence shows that certain client characteristics can influence a client's ability to develop an alliance and hence affect outcome.

However, some evidence exists that contradicts these findings. Klein *et al.* (2003) treated 455 depressed patients with either cognitive behavioural analysis system of psychotherapy (CBASP) or CBASP and Nefazodone. CBASP as described by the authors represents a form of cognitive behavioural therapy for depression incorporating 'situational analysis' techniques. They found no relationship between alliance and the patient characteristics of symptom severity, co-morbid anxiety, substance use, personality disorders, level of social functioning over the past five years and history of childhood abuse and neglect. Alliance was a robust predictor of outcome, even after controlling for these factors. However, there are several

methodological limitations to this study that may account for the apparent discrepancy in the research literature. Patients who had a prior history of 'failing' two different courses of psychotherapy within the past three years were excluded, as well as patients with a main diagnosis of antisocial, schizotypal or borderline personality disorder. Thus it could be argued the study excluded people who had difficulty in developing good quality alliances. In addition, advertisements were used to recruit participants; therefore people who replied to these adverts may have been more motivated to develop good alliances with their therapist.

Another factor that may have an impact on alliance and outcome is the therapist's, as well as the client's interpersonal history. Hilliard *et al.* (2000) assessed the interpersonal process of psychodynamic psychotherapy, as well as therapists' and clients' assessment of their relationship with both parents. The results showed clients' early parental relationships were related to outcome directly and indirectly through the mediating effect of the therapeutic process. Therapists' early parental relationships were related to the therapeutic process, which in turn had a direct effect on outcome.

Finally, research has begun to examine how client factors that are specific to the treatment interact with the alliance-outcome relationship. Cloitre *et al.* (2004) treated patients who had childhood abuse-related post traumatic stress disorder with exposure therapy aimed at the development of interpersonal and emotion regulation skills. An effect size of .47 was obtained for the relationship between therapeutic alliance and outcome, larger than previous research. They also found that an improved capacity to regulate negative mood during the exposure phase of the treatment mediated this relationship.

In summary, the complex nature of the therapeutic relationship is reflected in the developing complexity of the research that is now investigating it. This research shows that therapist-specific factors such as competency may have a moderating effect on the alliance-outcome relationship. Therapists' interpersonal history has also been shown to have an effect on the therapeutic process, which in turn has an impact on outcome. Skills acquired during treatment, such as the ability to regulate mood

have been shown to act as a mediator between alliance and outcome. Finally, the therapeutic alliance itself may have a mediating effect on the relationship between certain client factors such as interpersonal style, and outcome.

Comparison of cognitive and psychodynamic conceptualisations of the therapeutic relationship

Both orientations emphasise the importance of the therapeutic relationship in producing change, in particular the need to develop the alliance or collaborative aspect of the relationship to allow the work of therapy to be done. This is supported by the research that has found a better therapeutic relationship leads to better outcome, irrespective of type of treatment. Attachment theory can offer some explanation of this. Howe (1999) posits that a relationship between therapist and client mirrors that of a developmentally sound parent-child relationship. The therapist provides a secure base from which the clients can explore themselves and their problems, and thus the client experiences a relationship that is qualitatively different from early childhood relationships that may have led to the problem (Henry & Strupp, 1994; as cited in Howe, 1999). Therefore regardless of type of therapy or techniques employed, ultimately the therapeutic relationship may offer the necessary environment and interpersonal contact that is necessary for change.

The key difference between cognitive and psychodynamic perspectives is how the interpersonal contact is used. Psychodynamic therapists are more focused on the processes within the relationship, the transference and countertransference, whereas traditional cognitive therapy focuses on the mastery of cognitive techniques, to allow the client to 'be their own therapist'. As cognitive therapy has developed, more attention has been paid to the relationship. But arguably only modified forms of cognitive therapy, such as schema therapy and cognitive therapy for personality disorders, use the relationship explicitly to bring about change.

Cognitive and psychodynamic therapy both gave little attention to the transference and countertransference early on. As each therapy has developed, these concepts have

increasingly become important aspects for attention both theoretically and clinically. Currently transference is used to varying degrees within the two orientations. Psychodynamic therapists view transference and its understanding a central task in the therapy (O'Brien & Houston, 2000). Cognitive therapists, on the other hand, acknowledge its existence and recognise it provides rich material regarding clients' beliefs (Beck, *et al.*, 1990), but do not view it as the main technique to be used in eliciting such beliefs.

One of the main therapeutic tools used in psychodynamic psychotherapy is reflecting on the countertransference. Within specialised forms of cognitive therapy, countertransference is important, but again does not play such a central role as it does in psychodynamic therapy. For example, Young *et al.* (2003) recommends therapists be aware of their own schemas, coping styles and reactions to the patient, as they can be used as a resource for information regarding clients' schemas. Safran (1990a, 1990b) argues therapist reactions can be used to identify 'interpersonal markers' to highlight avenues of further exploration. In addition, Safran's (1990a, 1990b) theory of interpersonal schemas inviting an interpersonal 'pull' is not dissimilar to the concept of projective identification. Therefore psychodynamic perspectives view the relationship as the actual vehicle for change, and in this way see the use of the relationship as having a direct effect on outcome. Traditional cognitive viewpoints, by contrast, seem to argue the therapeutic relationship acts as a moderator that influences the link between specific techniques and outcome.

Another clinical issue that arises is whether exploring the transference and countertransference is in fact needed and/or appropriate when treating people with mild problems with cognitive therapy. For example, CCBT is a promising form of treatment for mild problems in which there is no role for the therapeutic relationship. This may be beneficial for some clients, but not others, for example it may benefit a client who is agoraphobic and cannot leave the house. Following from Safran (1990a, 1990b), perhaps an exploration of transference/countertransference should be undertaken when treating milder problems only when difficulties in the relationship occur.

Conclusion

To summarise, the therapeutic relationship is important in both cognitive and psychodynamic therapy. Each use the relationship differently, but the trend in cognitive therapy of using transference and countertransference processes to understand complex problems and ruptures in the alliance, suggests the two orientations are converging on some levels. Within the research, various client, therapist and treatment-specific factors have been implicated in the role of the relationship in effecting change, but the function of these is complex and not easily delineated.

As the research shows a good therapeutic alliance is associated with good outcome, it can be concluded that the therapeutic relationship may play an important role in effecting change in clients. This is supported by both theoretical standpoints, although psychodynamic theory would place more importance on the role of the relationship than traditional cognitive therapy. However, the precise nature of the therapeutic relationship's role is still unknown, and as a consequence, no firm conclusions can be made. For example, it is unclear whether the relationship between client and therapist acts as a mediator between certain client and/or therapist characteristics and outcome, or if those same factors are the mediators or possibly moderators affecting the alliance-outcome link.

Clinically this suggests that therapists should pay attention to the development and the maintenance of the therapeutic relationship if specific techniques are to have any influence. Furthermore, therapists throughout their careers, but perhaps particularly at the beginning, should have training in relationship skills, such as communication of empathy. Research suggesting that therapists' early parental relationships can affect the therapeutic process (Hilliard, *et al.*, 2000) highlights that having a good awareness of personal beliefs, schemas and attitudes, as well as the impact of these upon the therapeutic relationship and process should be considered important. However, clinical psychology training courses do not make personal therapy a component of the course. Milton (2001) comments that without personal analysis, 'most people are ill-

equipped to make sustained clinical use of their countertransference rather than enacting it' (p. 442). The absence of compulsory personal therapy highlights the importance of supervision as a means of exploring the transferential and countertransferential aspects of the therapeutic relationship to inform clinical work.

Although there have been significant developments in the research, questions still remain regarding the exact role of the therapeutic relationship in producing change. Future research could focus on gaining a clearer understanding of the different components that make up the therapeutic alliance in other types of therapy. For example, mutual liking and trust were found to be less important than agreement of goals and tasks and confidence in the therapist's ability for cognitive behaviour therapy (Andrusyna, *et al.*, 2001). This is consistent with the cognitive theory, but maybe different for other forms of therapy that emphasise the role of the relationship in producing change, such as psychodynamic therapy. In addition, more research is needed to investigate computerised forms of therapy; in particular the possible long-term effects of this treatment compared with other traditional forms of treatment. Linked to this is the question of whether exploring transferential/countertransferential processes are needed to the same extent when working with people with mild to moderate problems, as compared to work with complex problems. In light of working with complex problems, more emphasis on these processes and the relationship as a whole within cognitive therapy has occurred. This supports the view that the therapeutic relationship might be more important in working with more complex problems. Research could further investigate this issue by looking at whether using the therapeutic relationship differently would affect outcome. For example, by emphasising the mastery of techniques to clients versus exploring transference reactions within the therapy, with a variety of problems and differing levels of severity.

In conclusion, recent NICE guidelines (2004a) recommending that antidepressants should not be used for initial treatment of mild depression, will inevitably increase the number of referrals for psychological therapy. In this context, it becomes important to try and gain a better understanding of the exact nature of role the therapeutic

relationship in effecting change. In particular, clearly identifying factors that influence the role of the relationship in producing change will allow therapists to be more aware of possible future difficulties in the treatment. This could enable more favourable outcomes for clients, and less re-referrals to services in the long term.

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**DISCUSS THE CONSTRUCTION OF 'PSYCHOPATHOLOGY' IN
CHILDREN AND ADOLESCENTS**

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JULY 2006

YEAR 2

WORD COUNT: 5011

1. Introduction

The ways in which childhood ‘psychopathology’ is conceptualised, researched and treated is a topic that has been debated throughout the history of medicine and science (Richters & Cicchetti, 1993). Psychopathology can be defined as ‘an abnormal psychological condition’ (Higgleton et al., 1998, p. 1329). A particularly contentious issue in this area is how to define and conceptualise ‘abnormal’ behaviour in children. This is argued to have changed dramatically over the last 150 years, from ‘decrying’ the existence of mental disorder in children to reporting that as many as one in seven children suffer from a mental illness (Silk et al., 2000, p. 729).

Currently, childhood psychopathology is defined and classified according to two main systems: ICD-10 (WHO, 1992) and DSM-IV (APA, 1994). These systems adopt a categorical approach to classification, in that normal differs from the pathological in kind rather than degree (Sonuga-Barke, 1998). Mental disorder is defined by the current edition of DSM, DSM-IV, as:

...a manifestation of behavioural, psychological, or biological dysfunction in the individual...Neither deviant behaviour (e.g. political, religious or sexual) nor conflicts between the individual and society are mental disorders unless the deviance or conflict is a symptoms of a dysfunction in the individual (APA, 1994).

It is claimed that the DSM is atheoretical in that it makes no assumptions about the aetiology of mental disorders (Morrison, 1995). However, Sonuga-Barke (1998) points out that in fact DSM does follow a medical model of illness, the assumption of which is that disorders are seen as characteristics of the individual and not as a result of an interaction between the individual and the environment. Thus a childhood mental disorder, according to DSM, is endogenous and situated within the child. For a classification system such as the DSM to fulfil its overarching function of offering clinical utility, it must be both a reliable and a valid method of classifying mental disorders (Bentall, 2003). Reliability of a diagnostic system refers to the degree of

agreement between clinicians on the same diagnoses when independently assessing individuals (Kirk & Kutchins, 2006). Validity refers to the degree to which the classification system can distinguish between children who differ in clinically significant ways (Sonuga-Barke, 1998).

To provide an in-depth analysis of the ways in which 'abnormal' and therefore disordered behaviour is constructed in children and adolescents, one particular diagnostic category will be focused upon: Attention Deficit Hyperactivity Disorder (ADHD). ADHD is currently conceptualised as a cluster of symptoms: inattention, hyperactivity and impulsivity (APA, 1994). ADHD is arguably one of the most controversial health conditions of the last fifteen years (Kendall et al., 2003). The controversy centres around how to construct ADHD, with two main discourses dominating the debate: whether ADHD is an actual psychiatric disorder or a social construction of modern times, with the more extremist of these positions claiming ADHD is a 'myth' (Shrag & Divoky, 1975). This debate continues within the public and professional domain, amongst a background of increasing numbers of children being diagnosed and prescribed medication (NICE, 2006).

Therefore this essay will examine the construction of psychopathology in children and adolescents, using ADHD as an example, through an evaluation of the assumption that it exists as a mental disorder. Following this, an alternative view will be discussed, corresponding to the social constructionist discourse of ADHD. In addition, the construction of ADHD from the viewpoint of the children diagnosed with it and their families will be explored. Finally, conclusions will be made regarding the most useful way to construct child psychopathology, including consideration of the implications of this for children and their families and services, as well as recommendations for future research.

2. Evaluating the assumption that ADHD is a disorder

2.1 Examining the assumption that ADHD is a reliable and valid diagnostic category

DSM-IV is argued to allow for the most reliable and valid diagnosis of ADHD due to the inclusion of subtypes (McBurnett et al., 2006). However, the reliability of the ADHD diagnosis has been criticised with claims that the diagnostic process is highly subjective and influenced by the raters' cultural beliefs about particular behaviours (Timimi, 2002). In addition, it is reported that in community based samples, a proportion of individuals who meet the criteria for a diagnosis appear to also be functioning normally (Mota & Schachar, 2000). However, data regarding the reliability of structured interviews to aid diagnosis is reported to be fair to good (Woo & Rey, 2005). In a review of all the DSM-IV based rating scales, it was concluded that these scales could 'reliably, validity and efficiently measure DSM-IV ADHD based symptoms' (Collet et al., 2003, p.1015). However, it has been noted that with regards to the test-retest reliability of these scales, it is generally good when the same type of informant is used (for example, a parent) but significantly decreases when different types of informants are used (e.g. parental and teacher) (Woo & Rey, 2005).

Despite psychometrically sound ratings scales and interviews, prevalence rates of ADHD vary considerably, and have in general increased over time (Searight & McLaren, 1998). For example, studies have estimated the prevalence to range from 4% to 26% (Radcliffe & Timimi, 2004). Sex and age differences in prevalence is a common finding (Barkley, 2003), with boys outnumbering girls (BPS, 2000). Different assessment methods, nature of populations the samples are drawn from and differing criteria used to define ADHD are cited as reasons for the difference (Barkley, 2003). Some research demonstrates different rates of ADHD cross-culturally, despite using standardised criteria. For example, higher prevalence rates have been found in northern Europe compared with southern Europe (Searight & McLaren, 1998). In addition, research shows rates of diagnosis vary considerably cross-nationally, for example, Rappley et al. (1995) found diagnosis rates varied by a factor of ten across counties within the same US state.

The psychometric properties of the DSM-IV diagnosis have been examined in various studies. For example, the predictive validity of DSM-IV ADHD was examined by Lahey et al. (2004) who found 4-6 year olds who met full criteria for ADHD initially, did so three years later in addition to displaying marked functional impairment. In a large scale study, Graetz et al. (2001) found evidence for the discriminant validity of DSM-IV ADHD subtypes, in that differences were found between children who met the criteria for ADHD and normal controls on various measures of functioning. However, in a review of the literature, Woo and Rey (2005) concluded that data supporting the validity of the inattentive and hyperactive-impulsive subtypes of ADHD is scarce, in particular 'it remains to be demonstrated that hyperactive-impulsive children who are not inattentive have the same condition' (p. 344).

Comorbidity is a direct threat to the validity of a diagnostic category and a classification system as a whole, as failure to distinguish between two disorders may make that system clinically unworkable (Sonuga-Barke, 1998). In a review of the literature, Gillberg et al. (2004) presented evidence of ADHD being comorbid with nine other psychiatric disorders. They concluded that two in three of all individuals with ADHD in the general population meet criteria for at least two additional diagnoses (Gillberg et al., 2004). This is echoed by Brasset-Harknett and Butler (2005) who posit that it is more common to find a child with ADHD and another disorder, than to find a child with ADHD alone. Because ADHD cannot be reliably distinguished from other disorders, its validity as a distinct diagnostic category is highly questionable (Radcliffe & Timimi, 2004; Timimi et al., 2004). However, some have pointed out it is also rare to find 'pure' forms of other childhood disorders (Brasset-Harknett & Butler, 2005; Barkley et al., 2004),

2.2 ADHD as a biological dysfunction within the child

The construction of ADHD as an internal biological dysfunction and therefore endogenous to the child is consistent with the medical model of disorders. First, it is claimed that evidence from family, twin and adoption studies point to a substantial

genetic component in the aetiology of ADHD (Brassett-Harknett & Butler, 2005; Bradley & Golden, 2001; Daley, 2005; Kuntsi & Stevenson, 2000). In family studies, around 10-35% of family members have also been found to have ADHD (Bradley & Golden, 2001). However, the aggregation of a particular condition in families can be consistent with a genetic or an environmental aetiology (Joseph, 2000). Based on numerous studies of twins, which all varied in methodology and definitions of ADHD, Biederman (2005) found the mean heritability to be .77.

Advances in molecular genetic research over the past 10 years have meant that specific genes can be tested for an association or linkage with any given disorder. Genes underlying the dopaminergic systems have been most widely researched as candidate genes for ADHD (Kuntis & Stevenson, 2000). This is due to the evidence from the efficacy of stimulant medication in the treatment of ADHD, which serves to regulate dopamine levels in the brain in the treatment of ADHD (Daley, 2006). In a recent review, Waldman & Gizer (2006) found that for each candidate gene studied (approximately 14), there is a mixed picture of positive and negative results, but point out that this is true for all other psychiatric disorders. Overall, the strongest evidence comes from meta-analyses that have demonstrated consistent and significant associations between dopamine receptor D4 and D5 and ADHD (Waldman & Gizer, 2006).

Neuro-imaging research is a second area that is argued as evidence for a biological dysfunction in ADHD. A recent review of the studies that have used magnetic resonance imaging found that the evidence implicates several brain structures involved in ADHD. Specifically, studies have consistently found that compared to age and sex matched typically-developing controls, children with ADHD exhibit decreased brain volumes, particularly in the frontal lobe region and the cerebellum (Krain & Castellanos, 2006). However, neuro-imaging studies suffer from various limitations such as low sample sizes and associated low statistical power (Krain & Castellanos, 2006). Furthermore, studies most often include children who are taking or have taken medication in the past, thus the observed brain differences could be due to the effects of the medication (Timimi et al., 2004). However, research has found

that unmedicated children with ADHD also show decreased brain volumes compared to age and sex matched controls (Castellanos et al., 2002). Brasset-Harknett & Butler (2005) argue that the neuroimaging research has produced a 'bewildering' array of findings and that due to the complex nature of ADHD, the search for a single neurological cause may be too simplistic (p. 6).

Several biological factors have been implicated in ADHD including lead contamination, cigarette and alcohol exposure, low birth weight and maternal smoking during pregnancy (Biederman, 2005). Food additives are also cited as being a contributory factor in ADHD (Biederman, 2005), however, the evidence for this tends to be based on older studies, with newer research indicating that children with a high level of hyperactivity were no more vulnerable to the adverse effect of food colourings than children identified as having low levels of hyperactivity (Daley, 2006). Research investigating the role of neuropsychological deficits in ADHD continues to grow. A consistent finding is deficits in executive functions, particularly response suppression and visual working memory (Nigg, 2005). A meta-analysis of 83 studies, Willcutt et al. (2005) found consistent weaknesses on executive function tests, with effect sizes for all measures falling within the medium range. However, Nigg (2005) points out that it still remains to be demonstrated that the observed deficits are a causal factor in ADHD.

2.3 ADHD as an interaction of internal and external factors

The medical model view of ADHD has been criticised for not considering the context in which behaviour occurs (Brown, 2004). Jensen et al. (1993) highlighted that this was reflected in the small number of research studies investigating psychosocial factors, and they recommended the examination of a broader range of etiologic mechanisms. Difficulties in isolating family contextual factors specific to ADHD due to the co-occurrence of aggression and conduct problems has been suggested as a reason for the dearth of literature (Jester et al., 2005).

Woodward et al. (1998) compared children with hyperactivity to controls in a community sample and found that they were more often exposed to parenting behaviours that are aggressive and less proactive. Similarly, Lange et al. (2005) compared various family factors in children with ADHD, children with emotional disorders and normal controls. The results showed similar profiles between the two clinical groups, such as high stress, lack of support, low parental quality of life, greater reported problems in family functioning. The only significant difference between the two clinical groups were higher levels of authoritarian parenting in the ADHD group. In contrast to these findings, Rey et al. (2000) found no association between the quality of the family environment and adolescents with ADHD. However, diagnosis and ratings on the measures used to assess family environment were made by reviewing participant's medical file rather than ratings made by either the children themselves or their parents.

The correlational nature of these studies limits the conclusions that can be made with regards to the causal influence of family or parenting factors, in addition to the cross-sectional nature of the research. In the first study of its kind in the area of ADHD, Jester et al. (2005) followed over 300 children from school entry through to adolescence to examine the developmental trajectories of inattention/hyperactivity. A methodological strength of this study was the isolation of inattention/hyperactivity from overlapping aggression to enable an examination of the development of inattention/hyperactivity without the confounding effect of aggression. The results showed lower parental emotional support and intellectual stimulation in early childhood predicted membership in the inattention/hyperactivity group. Conversely, conflict and lack of cohesiveness in the family environment predicted membership in the aggressive behaviour group.

Attachment theory is argued to provide a coherent framework for an explanation of the development of ADHD (Erdman, 1998). For example, Stiefel (1997) presented three cases to demonstrate that early parent-child relationship stress, such as lack in family support, a fragile or absent relationship with the child's father, difficult infant temperament, sets up a 'demand-dissatisfaction cycle'. This cycle is characterised by a

difficulty between infant and caregiver in establishing a routine, and if prolonged may lead to a disruption in the attachment relationship. The anxious-resistant type of relating to attachment figures is argued to be particularly relevant in ADHD (Golding, 2004). Children with this type of attachment style will most likely have experienced inconsistent care and as a result exaggerate displays of negative affect in order to regulate parental attention. Monitoring availability of the caregiver is common, leading to restricted ability to explore the world. This pattern of behaviour is argued to explain the ADHD child's difficulties in attention and concentration (Stiefel, 1997; Golding, 2004). Support for this hypothesis comes from research that has shown ADHD is associated with insecure attachment (Clarke et al., 2002)

In summary, this discourse constructs ADHD as a distinct psychiatric category. Thus excessive activity in children is seen as abnormal and a manifestation of dysfunction in the child. From the research presented it can be seen that these assumptions can be challenged on several levels, and as such problems with the reliability and validity of ADHD as a 'mental disorder' remain alongside the evidence that emphasises the important of context when considering children's behaviours.

3. ADHD as a social and cultural construct

The ways in which childhood is constructed in Western culture is argued to have changed dramatically over the years (Silk et al., 2000). During the 20th century ADHD has had various names including minimal brain damage and hyperkinesis (Raflovich, 2001). This has been interpreted by some as the progress of clinical practice (Barkley, 1990), but by others as a form of unwarranted 'child control' (Breggin, 1998). For example, Rafalovich (2001) argues that the history of the 'symptoms' of ADHD represents an increasing drive to medicalize unconventional childhood behaviour. Indeed, this can be seen in the increase of the number of mental disorders in the DSM. In it's first edition in 1952, it contained 112, in 1994, it contained 374. Some argue this points to society being less tolerant of difference (Malacrida, 2004).

The ways in which 'abnormal' versus 'normal' behaviour in childhood is constructed not only varies within the history of a culture, but between cultures at any given time. As Timimi (2005) has argued, the assessment and diagnostic process for ADHD is highly subjective and influenced by the cultural beliefs held by the clinician, which is reflected in the varying prevalence rates cross-culturally. Indeed, research has shown that different cultures do construct ADHD in varying ways. For example, Norvilitis and Fang (2005) examined the perceptions of ADHD in college students in the United States and China via a self-report questionnaire. Results revealed that the Chinese students were more likely to endorse items that ADHD reflects poorly on the family and on the children's effort level, than the American students. Similarly, Bussing et al. (1998) interviewed White and African-American parents about their knowledge of ADHD. It was found that compared with the White parents, the African-American parents had significantly less knowledge of ADHD. The authors concluded that this result possibly reflects the fact that African American parents construct ADHD behaviours as normal or something that the child will outgrow.

The changes observed in the construction of abnormal behaviour in childhood perhaps reflects societal shifts in the value placed on certain behaviours. In their evolutionary account of ADHD, Jensen et al. (1997) describe how ancestral environments consisted of various threats with scarce resources. They argue that the 'response-ready' individual would most likely be advantaged in this environment, as survival depended on being hypervigilant, and being motorically 'hyperactive', i.e. foraging for food and the ability to quickly pounce or flee (Jensen et al., 1997). Thus the behaviours seen now as 'abnormal' may have actually been adaptive in ancestral environments. Some argue modern society has become hyperactive, with an ever increasing materialistic culture impinging on children at an increasingly young age (House, 2002). The current culture also highly values academic achievement, so the ability to sit still in school lessons and to be able to concentrate on tasks becomes very important. The behaviours described by the ADHD diagnosis do not fit into that value system. Kindlon and Thompson (1999, cited in Singh, 2002) also highlight the competitive academic environment within today's culture, and argue that medication for ADHD is a way of creating 'better boys' or boys who can achieve academically.

NICE guidelines recommend medication as a front line treatment to be followed by psychosocial intervention, if necessary (NICE, 2006). The guidelines were heavily influenced by the results of one large American study which found medication to be superior to behaviour management and routine community care (MTA, 1999). However, this study has been criticised as the behaviour treatment could never be replicated clinically. Timimi (2002) also argues that in fact, all groups showed sizeable reductions in symptoms. For Timimi (2002), the conclusions made by the MTA group reflects the interests and agendas of some of the researchers, who, funded by the drug industry, have a vested interest in highlighting results that enhance product sales. The pharmaceutical industry has also been argued to have actively promoted the idea of ADHD, particularly through financially supporting CHADD, a 16,000 strong organisation set up by parents in 1987, which advertises ADHD as a biological based disorder (Moncrieff, 2003).

Considering all the above issues, Timimi (2002) proposes that ADHD is best understood as a 'cultural defence mechanism'. That is, the notion of ADHD has been constructed as a cultural way of dealing with anxiety about childhood development (Timimi, 2002; 2005). This anxiety has arisen due to various cultural, social and political changes in Western society, such as an increase in violence, poverty and breakdown of the family unit, which has had the effect of changing the meaning and significance given to certain behaviours. He proposes within this context, where parents, teachers and professionals are looking for way to deal with these anxieties, the medical model exerts incredible cultural power. This together with 'profit-dependent pharmaceutical industry and a high status profession looking for new roles' (Timimi, 2004, p. 8), makes the ideal conditions for the rise of ADHD as a medical disorder. Similarly, Kendall et al. (2003) argues ADHD is a 'post-modern illness', or an illness that reflects the changing experience of human affliction that is shaped by cultural context. They argue the hallmark of a post modern illness is controversy over its legitimacy as a 'real' illness. These accounts of ADHD have been criticised as being 'scientifically flimsy' (p. 68), with no evidence to support the hypotheses (Barkley et al., 2004). These critics argue for hypotheses about ADHD to be useful, they must be testable and therefore stand up to scientific scrutiny.

In summary, this discourse rejects ADHD as a valid mental disorder, instead viewing the behaviours of inattention, hyperactivity and impulsivity as being socially and culturally constructed. A theme that seems to emerge from this discourse is that constructing certain behaviours as ‘abnormal’ and as a psychiatric condition that needs to be treated, is a way of promoting socially desirable behaviours across cultures.

Children & their parents’ constructions of ADHD

The voices of children and their families who experience ADHD in their lives are argued to be important (Brady, 2004), but rarely ever heard (Kendall et al., 2003). It is argued here that in order to provide a balanced discussion of the differing constructions of childhood psychopathology, the experience and meaning of psychopathology for the children themselves should be explored. Exley (2005) interviewed two boys with ADHD and found that both boys constructed their ADHD behaviours as deviant. The analysis showed that they drew on medicalised discourses to provide suggestions for managing their behaviour, such as giving medication. Notably, one of the boys understood ADHD as a ‘disease’ that could be caught. In a study investigating how seven children’s lives were affected by ADHD, Brady (2004) found that some children internalised the notion that they were in some way damaged, and that only medication could ‘fix’ them.

Kendall et al. (2003) interviewed 39 children and adolescents about their experiences of ADHD. The data revealed that they saw themselves as different from their peers. Again, medication was a common theme, with both positive “I’m real hyper, but I can control it with a pill” (p.123), and negative aspects “I don’t want anyone to know I take pills...because they would laugh at me” (p.123). Similar to Brady’s (2004) study, an important finding to emerge was that the children discussed ADHD in terms of who they were, rather than the symptoms they experienced, pointing to an over identification with the diagnosis of ADHD (Kendall et al., 2003).

Harbourne et al. (2004) conducted an in depth interview with the mothers and one father of nine boys diagnosed with ADHD. Using grounded theory analysis, they found that parents experienced a discrepancy between the way they conceptualised ADHD and the way others viewed the disorder. Specifically, parents felt their child's ADHD was a result of an innate biological condition, whereas they felt others viewed it as poor parenting. This often resulted in parents feeling blamed and experiencing 'battles' with others, including professionals, particularly around diagnostic issues. The theme of experiencing emotional distress also emerged, and parents tended to attribute this to the battles they experienced in gaining recognition and to the perceptions that they were blamed by others for the difficulties experienced by their children.

The experience of battles with professionals is also echoed in Malacrida's (2004) study that explored the perceptions of Canadian and British mothers of educators' roles in the medicalisation of their children's behaviour. It was found that British educators exhibited a strong antipathy toward medicalising children's behaviour problems, whereas the opposite was true in Canada. British educators were described as being firmly unconvinced of the medicalised status of ADHD. Malacrida (2004) attributes this difference to the differing degrees of medicalisation in each culture at the time of the study, which for the British data collection was the year 2000. Similarly, in their analysis of newspaper articles, Norris and Lloyd (2000) found that a strong voice to emerge was that of the parents, with the recurring theme of a struggle to gain a diagnosis of ADHD. They found the debate and, the most frequently quoted group of professionals firmly located ADHD within a biological framework.

In summary, research suggests that children tend to take up the medical discourse of ADHD viewing it as an internal dysfunction, which also appears to have a profound impact on the way children construct their identities. Parents also seem to take up the medical discourse, however, this is not reflected in their perceptions of how others construct ADHD, and as a result report experiencing continual battles against their support system, including services.

Conclusions

In summary, this essay has presented some of the ways in which childhood 'psychopathology' can be constructed, using the example of ADHD. As a starting point, the dominant medical discourse was examined, which classifies certain behaviours as 'abnormal' and therefore as an internal dysfunction. In fact what has emerged is that the reliability and validity of such diagnoses is highly questionable, in addition to the assumption that abnormality is entirely located within the child. Childhood 'psychopathology' was then discussed within the context of the social constructionist discourse. Within this discourse, what behaviours are defined as 'abnormal' in children is contingent on the prevailing view of childhood itself and the cultural context. What emerged from this discussion is the possibility that the medicalisation of children's behaviours may act as a form of social control, to ensure that socially desirable behaviours are promoted and social order maintained. Finally, the ways in which children and their parents construct the 'psychopathology' they are diagnosed with was explored. This discussion revealed the negative implications of such diagnoses for these children, and the difficulties inherent in being a parent of such a child in the context of debates surrounding the 'realness' of psychopathology in children.

The dominance of the medical discourse is reflected in the way this essay has approached the subject of different constructions of childhood 'psychopathology', and it could be argued this was a necessary starting point given the psychiatric dominance in mental health services in today's society. Treatment is based on an assessment of clinical need, and clinical need is, in part, determined through the categorical approach to classifying psychopathology. This raises the issue of whether questioning the 'realness' or the 'truth' of mental disorders in children is useful, when there is an argument that doing so could be impractical or irrelevant given biological psychiatry's continued dominance (Kirschner, 2001). Indeed, research shows the effect of such debate on families, particularly parents. Mental health services also operate within this context. Within these services different health professionals work together in teams and will carry with them different perceptions and views of child psychopathology. These differences will most likely be underpinned by the differing philosophies of the

professions concerned, which can lead to interdisciplinary tensions and conflict (BPS, 2000).

Most of the research presented purports to the medical model view of childhood psychopathology. Within this literature, a dearth of research exists that investigates the possible psychosocial factors involved in childhood 'psychopathology'. Future research should aim to correct this imbalance. However, within a constructionist framework, it becomes very important to examine the experience of the 'symptoms' that are constructed by the medical discourse as pathological, rather than the particulars of a given diagnosis, which has been the focus of most research into child 'psychopathology' do far. Thus future research should also aim to better examine the perceptions of children who are labelled as having a mental disorder, and the impact this has on how they construct their identities. As parents are also part of the labelling process, in that they present their children to services, their experiences should also be examined in more depth.

As this essay has shown, there are alternatives to viewing certain behaviours in children as abnormal and therefore pathological. Although pathologising behaviour could be viewed as a form of social control, not conceptualising behaviour as either 'normal' and 'abnormal' behaviour has implications for society. For example, social order is argued to require certain boundaries and limitations (Kirschner, 2001). It could be argued that without these boundaries social order would collapse. If, as in Bussing et al's (1998) study, society was to adopt the African-American viewpoint that behaviours thought to be indicative of psychopathology were in fact 'normal' and not in need of treatment, this would potentially have a number of implications. For example, taking an extreme view, it may mean that mental health services would no longer be viable, as they would no longer be needed. Currently, services are organised in such a way as to promote the 'internal dysfunction' view of children's behaviour, children get referred to services because there is something 'wrong' with them. However, in light of the constructionist views on psychopathology, an alternative model may be supporting these children more in schools, perhaps through educational psychologists rather than mental health professionals. Taking a less

extreme view, clinical psychologists are ideally placed to promote alternative constructions of psychopathology, due to their training in various models whilst being able to consider the merits of the medical model (Cobner, 2004). Thus within multidisciplinary teams, where a medical discourse typically dominates, it may be important for clinical psychologists to help teams think about the assumptions they make about children's behaviour.

It can be concluded that the issue of the ways in which child psychopathology is constructed is inherently tied up in not only the psychological, psychiatric and sociological domains, but also the philosophical. For this reason, negotiating this terrain is a challenge. What is clear is that in today's society, some childhood behaviours are constructed as 'abnormal'. As has been shown, this may not be the most valid or even appropriate way of viewing such behaviours. For professionals who work within the system that classifies normal and abnormal behaviour in children, it is perhaps important not to adopt one position inflexibly, but to be open minded to every construction and possibility.

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SMALL SCALE RESEARCH RELATED PROJECT

**A SURVEY EXAMINING GENERAL PRACTITIONERS'
VIEWS OF A PSYCHOLOGY SERVICE**

ELIZABETH MAY

5028 WORDS

Abstract

This study examined General Practitioners' (GPs') views of a psychology service via postal survey. A questionnaire was developed that investigated GPs' satisfaction of various aspects of the service as well as potential areas for improvement. Questionnaires were sent to 134 GPs in 28 practices. 57 questionnaires were returned. Results showed that over half of GPs surveyed were dissatisfied with the service, with the majority indicating that reducing the waiting lists was the main area needing improvement. The majority of GPs held a positive view about the treatment received by patients referred to the service. Methodological difficulties are highlighted and implications of the survey results discussed, particularly in light of the redesign of services that was taking place within the Trust. Finally, recommendations for future research are highlighted.

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1. Introduction

The last sixteen years has represented a period of change for mental health services in the NHS. With the recognition that mental health problems are implicated in as many as one in four primary care consultations (Department of Health; DH, 2003), and most mental health problems are managed in primary care (DH, 2000), this change has been particularly within primary care. The publication of a series of national documents and policies since the 1990s set out the objectives for the modernisation of primary care mental health services, and has been at the forefront of the drive to improve the quality and access to effective mental health services.

In 1999 the National Service Framework (NSF) for Mental Health was published that was designed to provide consistent clinical standards of care in England (DH, 1999). Seven standards represented a different facet of mental health care. Standard two described that service users with a mental health problem who contact their primary care health team should: “have their mental health needs identified and assessed; be offered effective treatments, including referral to specialist service for further assessment, treatment and care if they require it” (p. 12, DH, 2004). The publication of the NHS Plan (DH, 2000) outlined the major changes to the way mental health services were delivered. For the first time funding was to be identified for the creation of new posts specifically designed for primary care mental health services (Sainsbury Centre for Mental Health; SCMH, 2002). Graduate primary care mental health workers were employed to help GPs manage and treat common mental health problems with brief therapy techniques (DH, 2000). Communication and integration of primary and secondary care services was seen as key in implementing these changes, and it was proposed that link workers facilitate this process (DH, 2001).

Traditionally, primary care mental health services in the local Trust were comprised of counsellors within GP surgeries, and the Psychology service, described as ‘a resource for primary care at the interface with secondary care mental health services’. In response to the national guidelines, the Trust was in the process of redesigning these services. This would entail the introduction of a link worker who would enable better

integration of primary and secondary care services, for example, by advising GPs about care of patients with mental health problem and assessing patients where there was doubt about the most effective management plan. Secondly, a graduate mental health worker would also be appointed.

The Psychology service was set up in 1982 in response to a need for GPs to directly refer patients whose mental health problems could not be managed in primary care but who did not require secondary care services, the so-called 'neglected majority' (SCMH, 2005). Since 1982 it had retained a separate identity as a unique service for GP referrals, offering assessment and psychological treatment. The service was staffed by one A grade and six B grade clinical psychologists. A recent audit of GP referrals to the service revealed an annual referral rate of approximately 600 referrals per year, with an upwards trend. As a result of this, the waiting time for an assessment had risen to seven months, with an additional wait of up to eleven months for treatment.

With the increasing importance placed on strengthening primary care services to more effectively deal with mental health problems, surprisingly little research has been conducted investigating GPs views of mental health services (Double, 1999). A survey undertaken in Sheffield indicated on average GPs felt the quality of mental health services was good, but they wanted more of it (Double, 1999). Corney (1996) found that GP satisfaction rates increased when there were direct links with mental health professionals, with half the GPs surveyed citing waiting lists as a problem.

Many studies have evaluated satisfaction with clinical psychology services from a service user perspective, which is typically the focus of quality improvement practices (British Psychological Society, 1998). However, few studies have focused on referrer satisfaction, particularly within clinical psychology, which is argued to be equally important particularly when there are direct links with referrers, such as GPs (Murray *et al*, 1999). Research has investigated referrer satisfaction of various services including a voluntary sector drop in centre (Milne & Gibson, 1994), a mood and anxiety disorders unit (Lewis *et al*, 2004), a community team for people with learning

disabilities (Dagnan *et al*, 1993) and a forensic mental health service (Papanstassiou *et al*, 2003). Murray *et al* (1999) evaluated GP satisfaction with a clinical psychology service in Scotland. A postal questionnaire found that the majority of GPs were relatively positive about the service, with areas of dissatisfaction relating to the lack of availability of services.

Aims of the survey

It was identified that no formal evaluation of GPs' views of the Psychology service had taken place in the 24 years it had been operating. As the service was set up primarily for GPs, it was deemed necessary to explore whether the service was meeting their needs, and to identify the areas GPs felt could be improved. Traditionally 'satisfaction' with the service has been implicitly implied by the increase of GP referrals to the service. In light of the current national context of the move towards better integration of primary and secondary care services, and the redesign of mental health services in the Trust, the survey would thus serve the important function of assessing the value of the service from the perspective of the health care professionals who used it most frequently.

A postal satisfaction survey was chosen as a relatively quick and simple method of assessing a large number of GPs' views of the service. The project therefore aimed to answer the following questions:

1. What is the level of GP satisfaction with different aspects of the service, for example, waiting times, feedback about referred patients, treatment received by patients?
2. Do GPs perceive the service to be of value, for example, in terms of reducing their psychotropic prescription rates, length of consultations, referrals to secondary mental health services and personal work load?
3. What are GPs' perceptions of how the service could improve?

2. Method

2.1 Design

A postal questionnaire survey of all GPs in the Trust's geographical area was undertaken.

2.2 Ethical considerations

The Trust's Audit team in addition to the R&D department were consulted on the issue of ethics. The project was classed as service evaluation and as such ethical approval from the Local Research Ethics Committee was not considered necessary.

2.3 Participants

A total of 28 GP surgeries operated within the Trust's geographical area. These surgeries consisted of 134 GPs, each of whom was sent a questionnaire.

2.4 Measures

Following a review of published (Murray *et al*, 1999) and unpublished surveys of this kind (Ashurst & Ward, 1983; Mathews, 1998), it was felt that previous surveys did not contain the specific issues pertinent to the Psychology service. In consultation with the service manager, it was decided that a questionnaire should be developed. After consideration of the specific issues relating to the Psychology service and based on guidelines of questionnaire development (Barker *et al*, 1994), a first draft was developed. This was presented to the department at the bi-monthly meeting. The feedback received regarding appropriateness of the questions, wording of questions and the general lay out of the questionnaire were taken into consideration and a second draft was prepared. To assess the questionnaire's face and content validity, the second draft was presented to two local GPs who provided feedback on whether the questionnaire was easily understood and whether all pertinent issues were included. Any suggested changes were incorporated into the third draft, which was presented a second time to the service manager, who gave agreement on the final version of the questionnaire (appendix 1).

2.5 Procedure

As previous research of this kind typically shows a low response rate (McAvoy & Kaner, 1996) surgeries were contacted by telephone to inform them that the survey was taking place, to establish the names of the GPs in each surgery, and to inquire as to whether the practice manager of each surgery could oversee GPs receiving the questionnaire and returning them. All but two agreed, with the remaining practice managers stating it was more convenient for the questionnaires to be sent directly to the GPs. Each GP received one questionnaire with an explanatory letter asking for questionnaires to be returned as soon as possible and no later than 3 weeks from the date they were sent out (appendix 2). Stamped addressed envelopes were provided for return of the questionnaire. A covering letter explaining the survey and the instructions for distribution were included for the practice managers (appendix 2). Reminder letters were sent to all GPs two weeks later (appendix 4).

3. Results

A total of 57 questionnaires were returned, giving a response rate of 43%, slightly higher than other surveys assessing GP satisfaction with psychology services (Murray *et al*, 1999), but lower than other GP surveys (Burton & Ramsden, 1994; Milne & Gibson, 1994; Double, 1999; Corney, 1996).

3.1 Analysis

The results for each question were collated and presented in terms of the percentage of GPs who had chosen each category in the rating scale. The results for each question are presented overleaf. The results are presented in full in appendix 3.

1. Overall, how satisfied are you with the Psychology service?

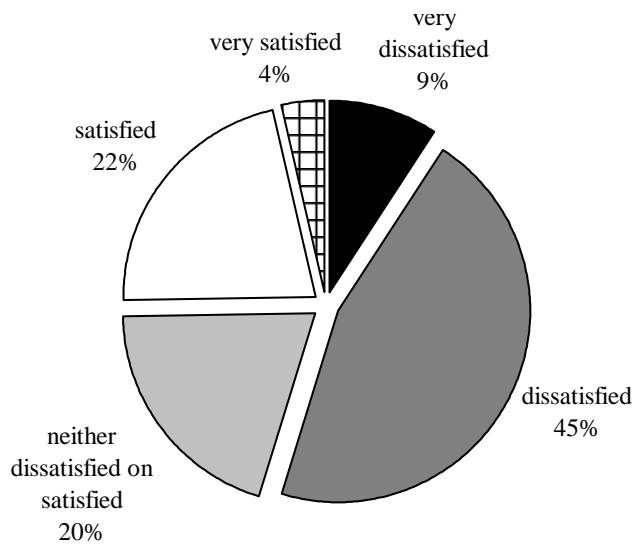


Figure 1. GP responses to question 1 (N = 55).

Responses indicated that 26% of GPs were either satisfied or very satisfied with the service overall, whereas 54% were either dissatisfied or very dissatisfied. Two GPs added to their response for this question “Only due to waiting times” and “Because of the wait”.

2. How well informed do you feel about what constitutes an appropriate referral to the Psychology service, compared with services such as psychiatry, CMHTs and clinical psychology based within the CMHTs?

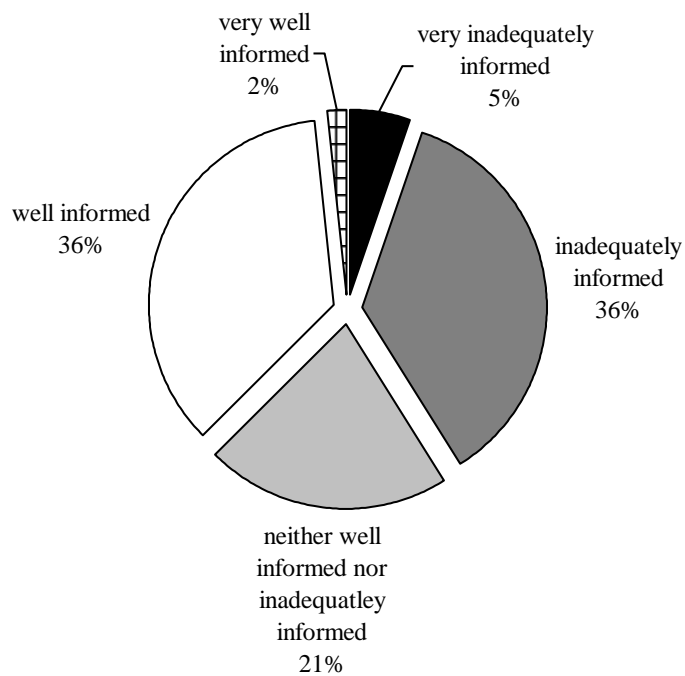


Figure 2. GP responses to question 2 (N = 56).

Overall, 38% of GPs felt they were either very well informed or well informed. However, 41% of GPs thought they were either inadequately informed or very inadequately informed.

3. a) Do you have access to a counsellor in your practice?

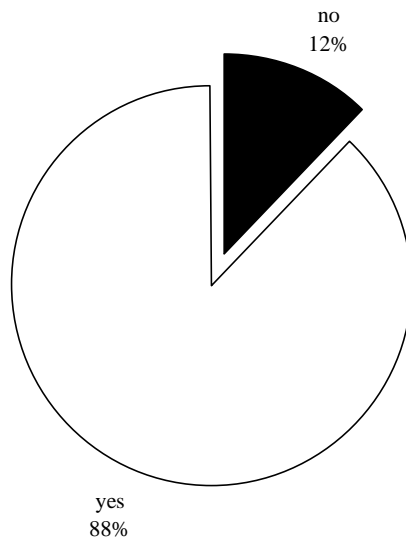


Figure 3. GP responses to question 3a (N = 57).

As can be seen above, 88% of GPs reported they had access to a counsellor in their practice, whereas 12% reported they did not.

3. b) If yes, please estimate the percentage of patient referred to the Psychology Service who have previously seen a counsellor in your practice?

Responses to question 3b	Number of GPs who endorsed the response (N = 43)
"Don't know"	6
10%	6
"few"	4
5%	4
>5%	4
>10%	3
"Low"	3
0	3
70-90%	3
1%	2
0-2%	2
5-10%	1
30%	1
"not applicable"	1

Table 1. Table to show GP responses to question 3b

From the table above it can be seen that the majority of GPs either indicated they did not know the percentage of patients previously seen a counsellor, or indicated that 10% of patients had previously seen a counsellor. Overall, it appears the majority of GPs felt that between 0 and 10% of referred patients had seen a counsellor previously.

4. How long do you think the waiting time is for an assessment in the Psychology service?

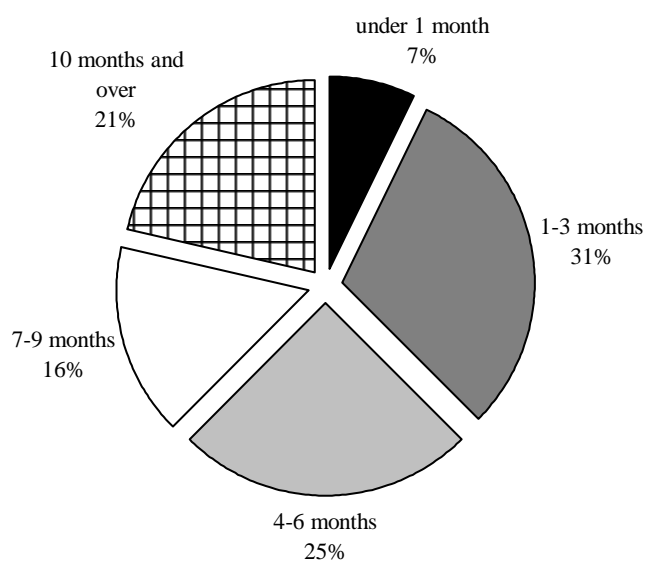


Figure 4. GP responses to question 4 (N = 56).

Responses indicated that the majority of GPs estimated the waiting time for an assessment at 1-3 months. The actual waiting time for an assessment was 7 months at the time of the survey. 25% of GPs estimated the waiting time for assessment at 4-6 months, with 21% estimating ten months and over.

5. How long do you think the waiting time is for treatment in the Psychology service?

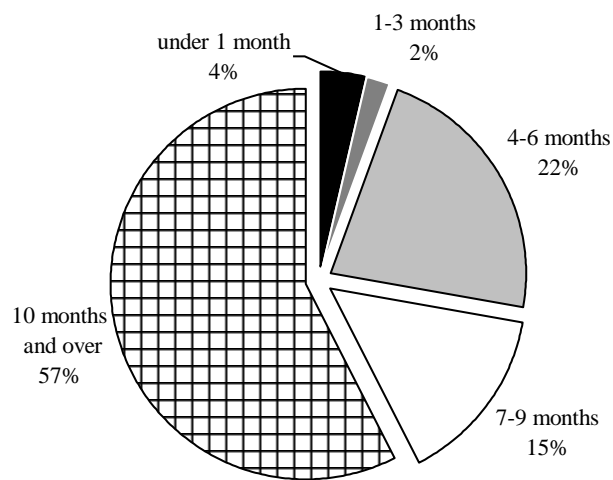


Figure 5. GP responses to question 5 (N = 54).

Results showed that the majority of GPs estimated the waiting time for treatment at 10 months and over. The actual waiting time for treatment at the time of the survey was between 7 and 11 months.

6. What do you feel is an acceptable waiting time for a non-urgent assessment?

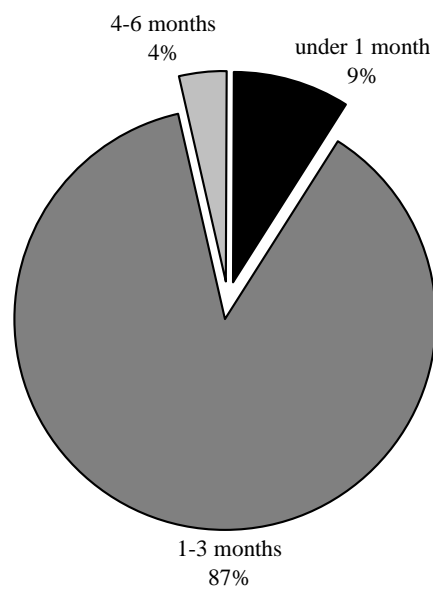


Figure 6. GP responses to question 6 (N = 57).

From the above, it can be seen that 87% of GPs felt that patients should only wait between one and three months for a non-urgent assessment. 9% felt patients should be seen for a non-urgent assessment within one month of being referred.

7. How satisfied are you with the feedback received after assessment?

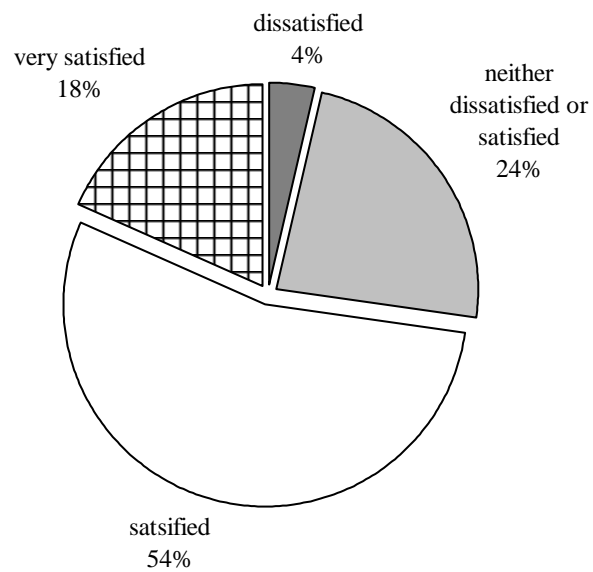


Figure 7. GP responses to question 7 (N = 55).

As can be seen, 72% of GPs were either very satisfied or satisfied with the feedback they received following assessment, with 4 % dissatisfied.

8. How satisfied are you with the feedback received about ongoing treatment?

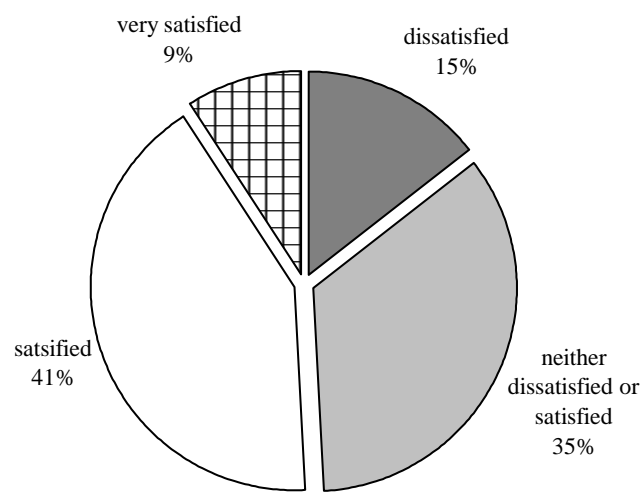


Figure 8. GP responses to question 8 (N = 55).

As the pie chart above indicates, 50% of GPs were either satisfied or very satisfied with the feedback received about ongoing treatment, with 35% neither dissatisfied or satisfied and 15% dissatisfied.

9. How satisfied are you with the amount of contact and opportunity to liaise/consult with the Psychology service about patients:

a) Generally

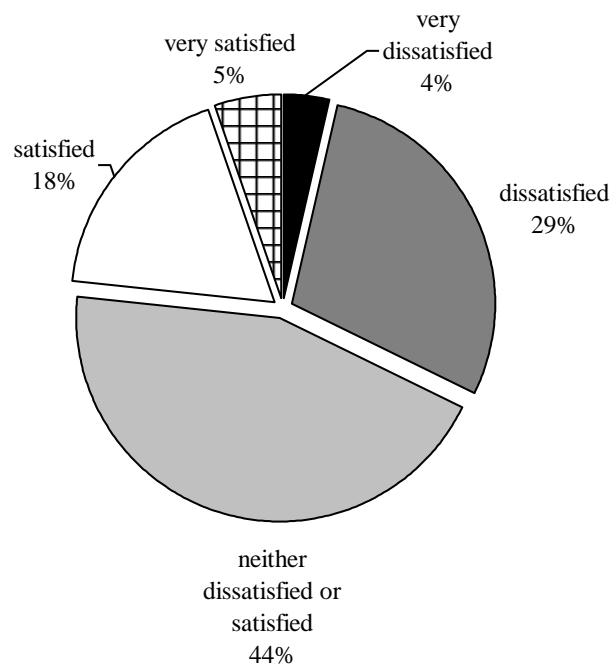


Figure 9. GP responses to question 9a (N = 56).

As can be seen above, 33% of GPs were either very dissatisfied or dissatisfied with the amount of contact and opportunity to liaise with the service generally. 23% of GPs were either satisfied or very satisfied, with 44% of GPs reporting they were neither satisfied nor dissatisfied.

9. How satisfied are you with the amount of contact and opportunity to liaise/consult with the Psychology service about patients:

b) With regards to the management of risk

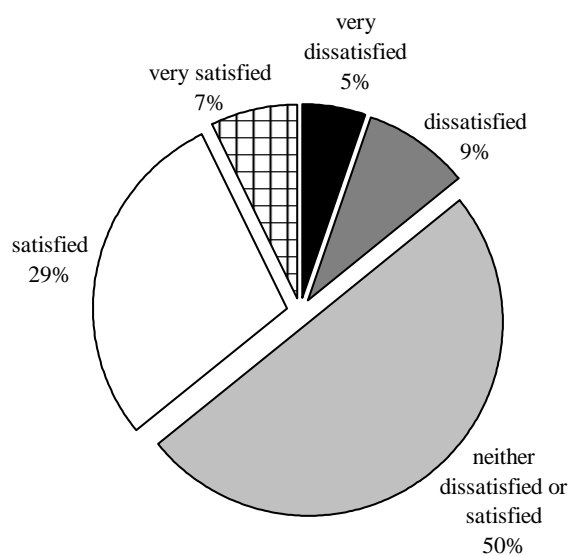


Figure 10. GP responses to question 9b (N = 56).

The results show that 36% of GPs were either very satisfied or satisfied with the amount of contact and opportunity to liaise with the service with regards to the management of risk. 14% were either very dissatisfied or dissatisfied, with half neither dissatisfied or satisfied.

10. How satisfied are you with the treatment received by patients you have referred to the Psychology service?

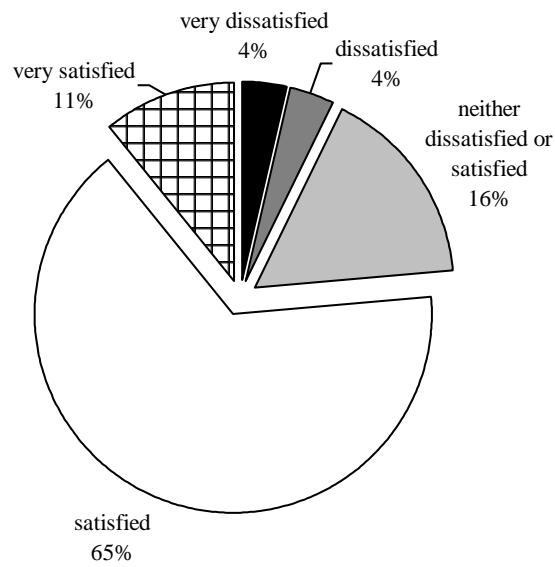


Figure 11. GP responses to question 10 (N = 55).

Overall, 76% of GPs were either very satisfied or satisfied with the treatment received by patients from the service. Only 8% were either very dissatisfied or dissatisfied, and 16% indicated they were neither dissatisfied or satisfied.

11. Please estimate how the following issues have been affected as a result of psychological treatment from the Psychology service for the majority of your referred patients:

a) Psychotropic medication rates

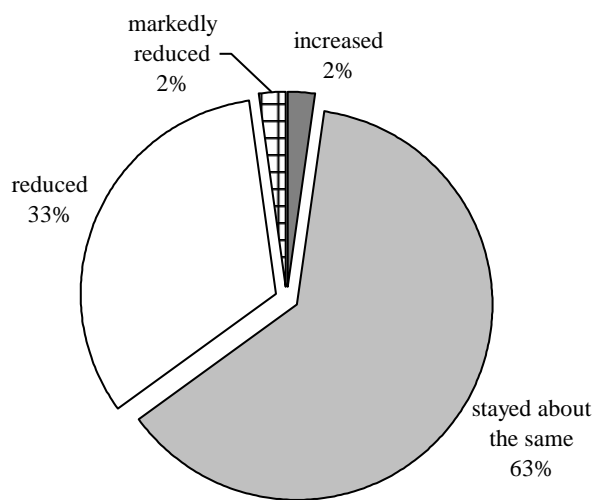


Figure 12. GP responses to question 11a (N = 43).

It was found that 63% of GPs indicated that their psychotropic medication rates had stayed the same as a result of treatment for the majority of their referred patients. However, 35% reported prescription rates had reduced or markedly reduced. 2% reported their prescription rates had increased as a result.

11. Please estimate how the following issues have been affected as a result of psychological treatment from the Psychology Service for the majority of your referred patients:

b) Number of GP consultations

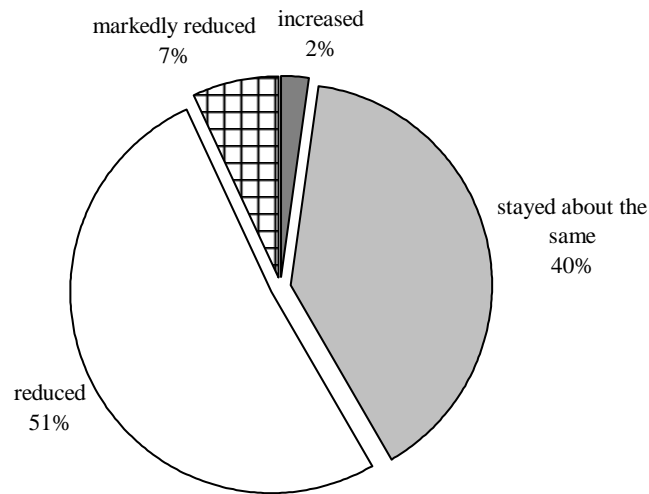


Figure 13. GP responses to question 11b (N = 43).

The results indicated that 58% of the GPs found that the number of consultations for the majority of their referred patients had markedly reduced or reduced. 40% reported the number had stayed the same, while 2% had found that consultations had increased.

11. Please estimate how the following issues have been affected as a result of psychological treatment from the Psychology Service for the majority of your referred patients:

c) Personal workload

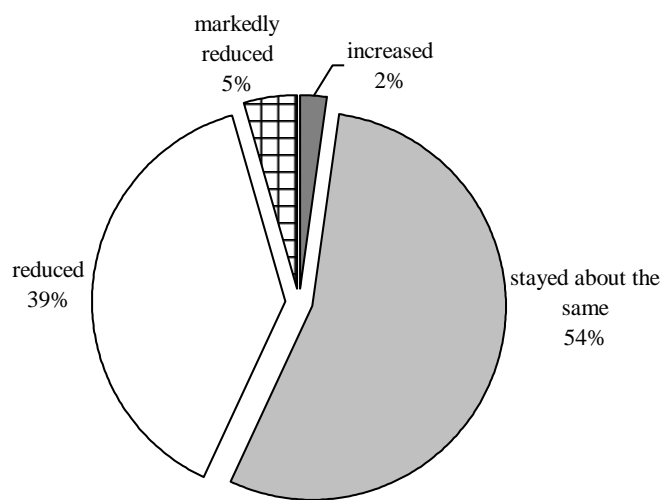


Figure 14. GP responses to question 11c (N = 44).

As the pie chart above indicates, 54% of GPs reported their workload had stayed the same as a result of psychological treatment from the service, whereas 44% felt their workload had either markedly reduced or reduced.

11. Please estimate how the following issues have been affected as a result of psychological treatment from the Psychology Service for the majority of your referred patients:

d) Rates of referral to secondary mental health services

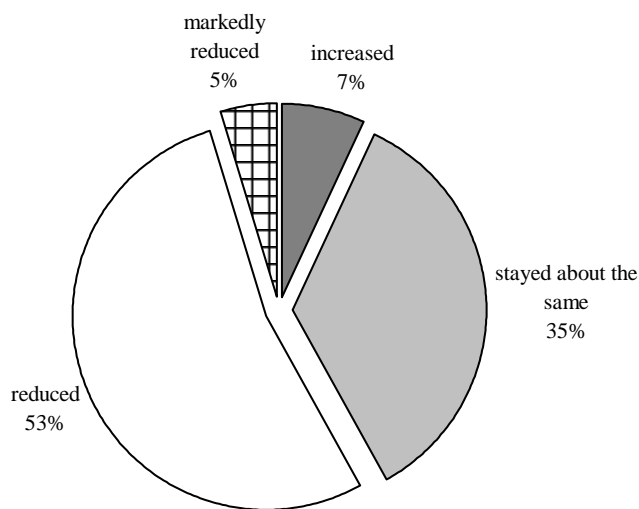


Figure 15. GP responses to question 11d (N = 43).

It was found that 58% of GPs felt that rates of referral to secondary mental health services had either markedly reduced or reduced as a result of their patients receiving treatment from the service. 35% reported this had stayed the same, while 7% reported an increase in secondary mental health referrals.

12. How do you think the Psychology Service could be improved?

The comments given by each GP for this question are included in appendix 5 and shown in summary in the table below.

Area of improvement identified by GPs	Frequency of GP endorsement (total N = 43)
Shorter wait/reduce waiting list/faster access	34
More resources/psychologists	6
Better liaison/communication regarding waiting times, treatment and services available	6
Less paperwork for patients	2
GP education/information regarding CBT	2

Table 2. GP responses to question 12.

As can be seen above, the area of improvement most frequently endorsed by GPs was reducing the waiting list, or enabling quicker access to the service. Increasing resources and better communication were the next most frequently endorsed areas of improvement. Less paperwork for patients and GP education regarding CBT were also identified as areas of improvement for the service.

13. Please add any other comments you may have

The comments given by each GP for this question are included in appendix 6 and shown in summary in the table below.

GPs comment	Frequency of GP endorsement (total N = 19)
Length of waiting lists prevented/stopped GP referring to service	4
Unaware of/little known about service	3
Clearer referral guidelines/pathways	3
Reduce waiting lists/increase resources	2
More CBT	2
Improve communication/ more reports	2
Department is understaffed /under resourced	2
Useful service	1

Table 2. GP responses to question 13.

From the table above it can be seen that the most frequently endorsed comment was that lengthy waiting lists had either prevented or stopped GPs referring to the service. The second most frequently endorsed comments were that GPs were either unaware or knew little about the service, and that the service should provide clear referral guidelines/pathways. Other comments included improvement of communication, more CBT, and the recognition that the department was under resourced. One GP commented that the service was useful.

4. Discussion

4.1 Summary of results

The survey indicated that over half of the GPs surveyed were either very dissatisfied or dissatisfied with the psychology service overall. However, three quarters of GPs were satisfied with the treatment received by patients. It appears a particular area of dissatisfaction was accessing the service; the majority of GPs cited reducing the waiting lists as the main area for improvement. Interestingly, only 16% of GPs correctly estimated the waiting time for an assessment, whereas the majority of GPs correctly estimated the waiting time for treatment. Over three quarters of GPs felt that an acceptable waiting time for a non-urgent assessment should be 1-3 months, a figure in direct contrast to the actual waiting time. These findings are reflected in other studies that show high levels of GP satisfaction with the quality of psychology services, but perceived poor accessibility to psychology services (Telford *et al*, 2002). Access to services has been found to be an important consideration when making referral decisions, as many GPs are deterred by lengthy waiting lists (Sigel & Leiper, 2004), a view endorsed by several GPs in this survey.

Almost three quarters of GPs were satisfied with the feedback they received following an assessment, and half indicated they were satisfied with the feedback received about ongoing treatment. Generally, just under half of GPs were neither satisfied or dissatisfied with the amount of contact and opportunity to liaise/consult with the psychology service about patients, a finding similar to Murray *et al*'s (1999) survey, which found the majority of GPs rated ease of contact with a clinical psychologist as variable. However, more GPs were dissatisfied than satisfied with this aspect of the service. GPs were equally ambivalent about their opportunity to liaise with the psychology service with regards to the management of risk, with over a quarter satisfied. These findings are important as it has been shown that GPs' views of psychological problems, treatments, and the ways in which they make referral decisions, are influenced by their professional interactions with psychologists (Sigel & Leiper, 2004). Thus GPs' views about the lack of opportunity to consult with the service may have a negative impact on their referral decisions, for example, decreased referral rates. This is particularly important in light of the research that shows poor

detection of mental health problems by GPs (Sigel & Leiper, 2004). These issues have implications for all mental health services particularly within the context of recent government policy emphasising the role of primary care in assessing and treating mental health problems (DH, 2000).

Over one quarter of GPs surveyed reported that they did not feel adequately informed about what constituted an appropriate referral to the Psychology service. Ross and Hardy (1999) argue that without explicit referral guidelines, GPs are unlikely to be well informed about criteria for referrals, which may be a possible reason for these findings. Most GPs reported that between 0 and 10% of patients had seen a counsellor prior to being referred to the Psychology service. Previous research has found similarities between GP referred cases of counsellors and clinical psychologists, with clinical psychologists treating more severe and chronic cases compared with counsellors (Cape & Parham, 2001), which may account for the overlap in referred patients reported in this survey.

Finally, number of GP consultations, personal workload and rates of referrals to secondary mental health services were all reported to have reduced as a result of treatment from the service. This is a positive result in light of research that shows GP consultations typically increase in number and length when patients have psychological problems (Zantinge *et al*, 2005). The majority of GPs reported that psychotropic medication rates had stayed the same as a result of psychological treatment, although over a quarter reported a reduction. Similar to the literature, some studies report a reduction in prescribing rates as a result of psychotherapeutic interventions (Ashworth *et al*, 2000), whereas other reports have found no significant differences (Baker *et al*, 1998).

4.2 Methodological issues and limitations

57% of the questionnaires were not returned, a figure substantially higher than the non-response rate of 39% found in a review of published GP studies (Sibbald *et al*, 1994). This has implications for the validity of the survey in that any conclusions drawn from the findings cannot be extrapolated to the GPs who did not choose to

share their views. Therefore any conclusions made should be interpreted with caution, and cannot be generalised to other Psychology services either locally or nationally. The response rate may have been increased by sending out more than one reminder letter, as research has shown that at least three reminders increases the cumulative response rate (Barclay *et al*, 2002).

The survey's face and content validity was investigated to a limited extent, but due to time and resource limitations, the survey's psychometric properties were not fully investigated. A larger sample of GPs could have been randomly chosen to provide judgements of the face and content validity. Using a different measurement of GPs views, such as qualitative interviews, to compare with the survey results of the same GPs, would have enabled an assessment of the questionnaire's validity, and may have also provided a richer and more in depth analysis of GPs' views of the service, in particular the areas of dissatisfaction and neutral responses. The reliability of the questionnaire could have been assessed by administering it to a sample of GPs on two different occasions, for example separated by a period of one month. Alternatively, equivalent items to those in the survey, but worded differently, could have been devised and used in parallel to the original survey. Administering both forms to the same sample of GPs and correlating the scores on the two administrations could have given an estimate of reliability. However, this would have significantly increased the length of the survey.

On reflection, the survey could have been improved. It is of note that only two questions obtained a full item response rate, with the highest item non-response rate occurring for the four questions that asked GPs to estimate the effect the service had on prescription & consultation rates, GP workload and referrals to secondary services. Closer inspection of these items revealed that GPs either did not respond, indicated the items were "not applicable" or wrote "don't know". This may reflect the ambiguity and difficulty of the question, or could indicate the numbers of referrals those GPs made were too small to generalise. It could be argued that the placement of the first question, which asks about overall satisfaction of the service, may have unduly influenced the way in which the remaining questions were answered. Placing it

at the end may have enabled the respondents to think through the relevant issues prior to making a final decision about their overall satisfaction of the service. However, it is recommended that general questions should precede specific questions in survey design (Robson, 1993). Finally, question 3b could have been constructed quantitatively rather than qualitatively, as the exact percentage of referred patients who received treatment from practice counsellors was not clear in this survey. In addition, it is not known why patients who saw a counsellor were referred for more psychological treatment, or how many sessions they saw the counsellor for etc. An audit of these referrals could be undertaken to explore these issues.

4.3 Implications for the service and further research

The survey has highlighted the importance of clearly defining referral pathways and criteria for all psychology services within the Trust, and it was recommended to the department that guidelines be drafted and circulated to all referrers. In addition, the survey highlighted that some GPs did not know about the service, indicating that the service was not as accessible as perhaps originally thought. This could be resolved by advertising the service, and a pamphlet outlining the service's purpose, philosophy and rationale was recommended and discussed with the department. Some concerns were raised about the possible effect of increasing the referral rate, but research could be conducted to investigate the impact of such advertising by comparing referral rates before and after such a pamphlet was distributed.

The results of the survey were presented to the Psychology service, but in hindsight the results could have been better disseminated to relevant parties. GPs could have been given the opportunity to indicate whether they would have liked feedback of the results. Alternatively, GPs and managers of the Trust could have been invited to a meeting in which the findings were presented. Better communication with the service was also flagged up by GPs as an area of dissatisfaction. From this survey the specific issues regarding communication are not known, and it is recommended that this could be a potential area to follow up with GPs in the future.

The survey has implications for the redesign of services within the Trust. The finding that the majority of GPs who filled out the survey were dissatisfied with the service would suggest that the service is failing to meet its original remit. Waiting times were viewed by GPs as unacceptable and were cited by the majority of GPs as the main area for improvement. This finding was perhaps not unexpected, and could provide an argument in favour of increasing the service's resources, a view that was endorsed by several GPs in the survey. Equally, however, the results could also lend evidence to the view that the service as it stands is not supporting the 'neglected majority' as it needs to. Introducing multidisciplinary 'intermediate care teams' has been suggested as a possible solution to effectively meeting the needs of this group of service users (SCMH, 2005), a solution that perhaps becomes more attractive in light of the more negative results of the survey.

It is recommended that the service repeat the survey annually to enable continued quality monitoring. Other possible avenues of assessing satisfaction could also be explored, for example, through a service user satisfaction survey. This would enable a useful comparison of views between referrers and service users. Future research could assess the impact the service has on GPs and the mental health of their patients by matching referred patients who received treatment from the service to those who did not, and comparing number of GP consultations, prescriptions rates etc. In addition, future research could also explore the potential effects of the area GPs were most dissatisfied with on their referral decisions and general views of psychological problems and therapy. Finally, at the time of the survey, various models for reducing the waiting lists were being explored. Repeating the survey following any changes to service delivery would enable a valuable insight into GPs views.

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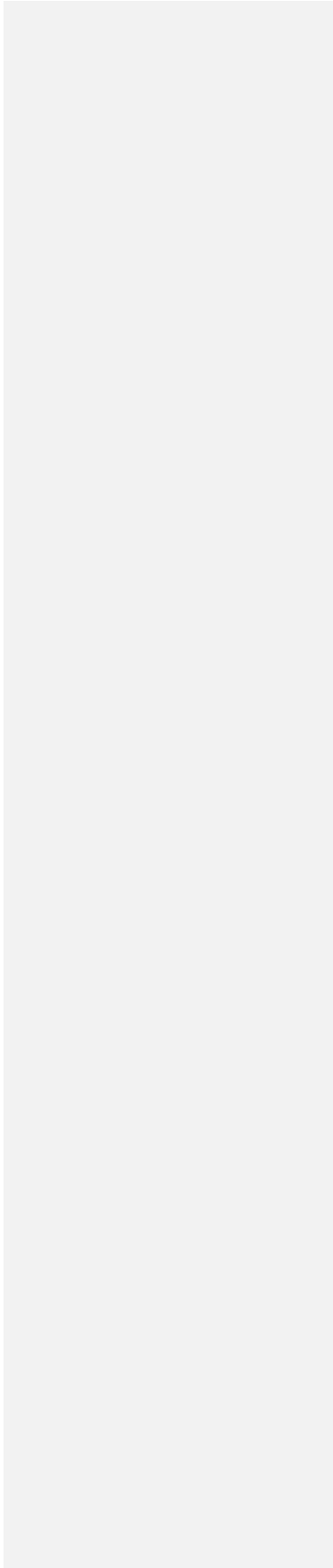
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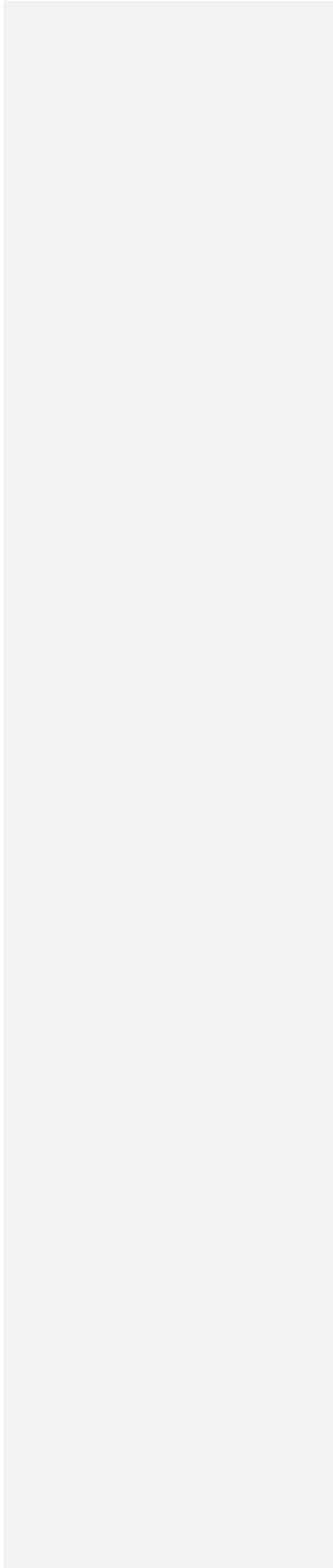
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Appendix 1. Questionnaire



Appendix 2. Covering letters to GPs and practice managers



15th July 2005

Dear Dr

I am a Trainee Clinical Psychologist on placement at the XXXX Psychology service, based at the XXXXX, XXXXX. In order to improve the service we provide, we are conducting an audit into GPs' views of our service, and would be very grateful if you could fill in the questionnaire provided and send it back in the stamped addressed envelope **by the 8th August 2005**.

You may be aware that we have had a high, and we would say appropriate, demand on our service which, with the current resources available has led to a waiting list problem.

The information you provide us will play an important part in service planning, and will help us to tailor our service specifically to your needs, and your patients' needs.

If you have any queries, please don't hesitate to contact me at the address above, or email me at: XXXXX

Yours Sincerely,

XXXXXX
Trainee Clinical Psychologist

GP address

15th July 2005

Dear

Re: audit into GPs' views of the XXXXX Psychology Service, XXXXX

Further to our telephone conversation, please find enclosed individual packs containing covering letters, questionnaires and stamped addressed envelopes for the audit we are conducting into GPs' views of the XXXX Psychology Service in XXXXX.

As previously discussed, I would very much appreciate it if you could oversee the doctors receiving each pack and indeed returning their response **by the 8th August 2005**.

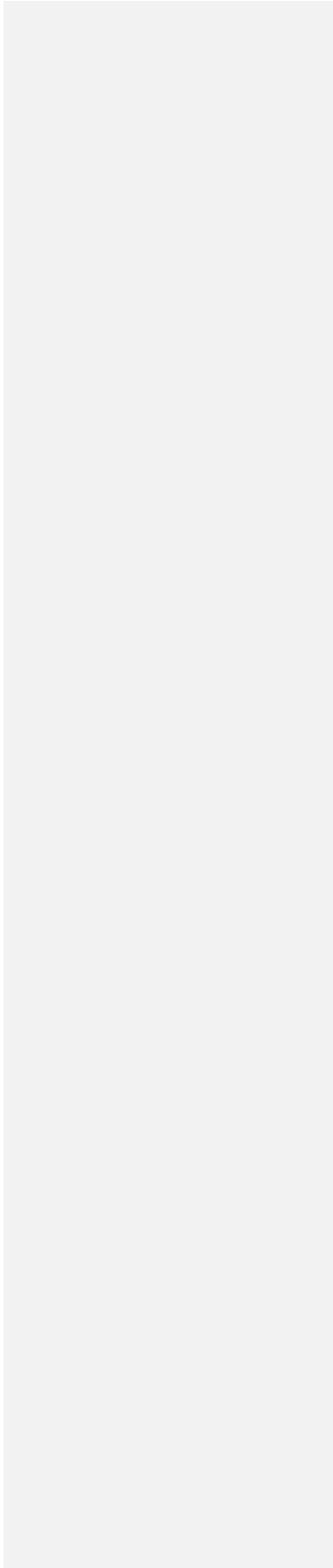
If you have any queries, please don't hesitate to contact me at the address above, or email me at: XXXXX.

Thank you for your help regarding this matter.

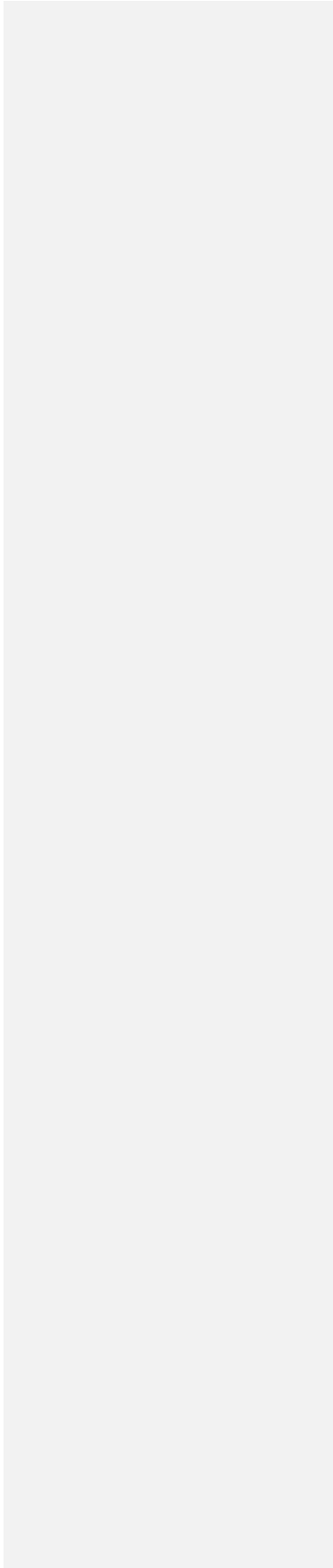
Yours Sincerely,

XXXXX
Trainee Clinical Psychologist

Appendix 3. Full results of the survey



Appendix 4. Reminder letter



August 2005

Dear GP

Re: Audit into GPs' views of the XXXX Psychology Service, XXXX

A few weeks ago I sent you a questionnaire asking for your views about the XXXX Psychology Service based at the XXXXX, XXXXX. You may have already returned the questionnaire, in which case please ignore this letter.

If you have not already returned your questionnaire, I would very much appreciate if you could spare a few minutes in fill it out and send it back to us in the stamped addressed envelope that was provided. We must have all completed questionnaires back by the *7th September 2005*.

Your opinions of our service are very important to us, particularly as the feedback received will help tailor our service to better meet your needs.

Thank you for your time.

Yours Sincerely,

XXXXX
Trainee Clinical Psychologist

Appendix 5. GP comments in full for question 12. 'How do you think the Psychology Service could be improved?'

“Mainly by improving waiting lists. Also consideration of continuity of treatment. I have several patients whose treatment has been interrupted or prematurely terminated because their therapist was only on a short placement or left.”

“Better liaison with (interested) GPs; less cumbersome patient forms; reduce wait time to treatment; GP education e.g. cognitive behaviour therapy”.

“Regular updates on staff. Areas of expertise advertised. Regular updates of waiting lists”.

“Shorter wait”.

“Better access times. I tend not to refer as waiting times unacceptable. I have referred to psychologists at XXXX and also to counsellor/therapists.”

“Shorter waiting time for treatment.”

“Information about appropriate referrals/waiting times. Information about CBT.”

“You people need to go out into the real world where GPs work and look after patients.”

“More Manpower!”

“Access access access.”

“Better and faster access.”

“Shorter waiting times. Greater resource input from Trust.”

“Less waiting – urgent 1 month, non urgent 3 months.”

“Shorter waiting lists (pie in the sky). More info about the type of Rx proposed and likely length of Rx at onset of Rx”

“See them quicker!”

“Less wait.”

“More psychologists and a shorter waiting time.”

“Faster assessment and treatment. More anger /anxiety management groups.”

“More psychologists. Quicker appointments especially for urgent cases.”

“Shorter waiting times!”

“More communication regarding services available & which patients would most benefit from these.”

“Lower waiting times.”

“More sessions for patients.”

“Waiting list is the main problem! Understandable as demand will always exceed supply but so bad that often not worth referring to.”

“Better liaison with feedback about when patient will be seen, treatment and outcome. Mainly about speeding up when patients are offered treatment.”

“Shorter waiting times for treatment.”

“Principally by cutting waiting times for assessment and treatment. One year or longer is not a service!”

“Not aware of XXXX service.”

“Shorter waiting times.”

“Time to appointment.”

“Shorter wait and less paperwork asking patients if they still want treatment!”

“Very long waiting times – need to improve.”

“Shorter waiting times.”

“Less waiting time & an Urdu speaking psychologist”

“Shorter waiting times for treatment – perhaps more psychologists!!”

“Shorter waiting times (It’s excellent when the patients get to you).”

“Clearer guidelines and much faster treatment.”

“More resources!”

“Shorter waits.”

“Faster access. Better info re service.”

“Shorter waiting times for assessment and treatment.”

“More rapid response: When patients are seen they get good service – the problem is the waiting time.”

“From the patients I have seen that have had treatment via the XXXX the quality of treatment is good, but unfortunately cannot respond to help for people in times of crisis lower ebb as often patients had antidepressants and are improving by the time they are seen.”

Appendix 6. GP response in full to question 13. Please add any other comments that you may have

“To liase better with psychiatry services re referrals between services. We have indications re referral indications for CMHT, psychiatry and clinical psychology in CMHTs!! Pathways would be useful.”

“Useful service and generally responsive to urgent referrals.”

“Waiting times so bad prevents me from referring.”

“Shorter waiting time for treatment.”

“I would refer patients but have been put off by apparent long waiting times, patients have sought private options.”

“I don’t really know very much about the service, does it offer CBT, I would like to know more as I would probably like to refer more.”

“Interim reports on patients undergoing long periods of treatment would be helpful.”

“See them quicker.”

“Poor service due to understaffing.”

“Communication generally.”

“Given up referring. Wait is too long!”

“Unfortunately the referral rate is very low amongst all of my colleagues as well as myself because of the unacceptable waiting list. Most patients see our counsellor, are referred to psychiatry or pay for private counselling.”

“Some referral guidelines would be helpful as quite often not sure which service is most appropriate.”

“Simple referral guidelines about who to refer to – psychology – CMHT – acute psychiatry”

“Didn’t know of its existence.”

“Essential for GPs to have access to this form of therapy – I would prefer ‘more’ (i.e. behavioural modification etc).”

“Patients end up on drugs simply because of the wait. Much more CBT would be invaluable.”

“I imagine the department is under-resourced.”

“I have not referred patients to this service as I was not aware of its existence. I obviously missed previous publicity about it.”

LITERATURE REVIEW

ELIZABETH MAY

**THE ROLE OF COGNITION IN OBSESSIVE-
COMPULSIVE DISORDER: A LITERATURE REVIEW**

2006

5047 WORDS

Introduction

During the past decade, the understanding and treatment of obsessive-compulsive disorder (OCD) has become more cognitive than behavioural in emphasis (Clark, 2005). This review will provide a summary of the literature concerning the role of cognition in the development and maintenance of OCD. First, a brief description of OCD will be given, followed by a discussion of the cognitive appraisal models of OCD including recent theoretical and empirical developments in the field. Difficulties with these models in explaining the initial development and maintenance of OCD will be highlighted, and it will be argued that the self-concept and attachment experiences can provide greater understanding of these issues. Finally, areas for future research will be discussed.

Description of OCD

OCD is argued to be one of the most devastating and complex emotional disorders (Abramowitz & Deacon, 2005). OCD is characterised by obsessions, compulsions or both. The Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994) defines obsessions as recurrent thoughts, impulses or images that are experienced as intrusive, unreasonable and distressing. Compulsions are repetitive behaviours (such as checking) or mental acts (such as counting) that are used to relieve anxiety provoked by the obsessions (APA, 1994). The most common obsessions include contamination, the need for symmetry and order, obsessions with sexual, aggressive and somatic themes, and the most common compulsions include checking, cleaning and counting (Rasmussen & Eisen, 1992). OCD is co-morbid with many other disorders including depression, anxiety, alcohol or substance misuse and eating disorders (Heyman *et al.*, 2006). Prevalence rates are similar cross-nationally and internationally, with lifetime rates ranging from 1.9% to 2.5% (Weissman *et al.*, 1994). Recent NICE guidelines recommend cognitive-behaviour therapy (CBT) as an initial treatment for OCD (NICE, 2005), highlighting the need for greater understanding of OCD from a cognitive-behavioural perspective.

Cognitive appraisal models of OCD

Appraisal models of OCD are based on Beck's (1976) model of emotional disorders. Beck's (1976) model posits that underlying different types of psychopathology are various 'dysfunctional' beliefs. For example, social phobia is proposed to arise from particular beliefs emphasising ridicule or rejection by others, whereas depression arises from beliefs about loss and failure (Beck, 1976; Beck & Emery, 1985). Several cognitive appraisal models of OCD exist, with all emphasising different belief domains in the pathogenesis of OCD. However, they share two fundamental principles. First, that obsessional problems occur as a result of faulty appraisals or interpretations of 'normal' intrusive thoughts as highly significant and representing some kind of threat (Shafran, 2005). These faulty appraisals then lead to an attempt to control the thought or neutralise the distress associated with it (Wells, 1997). Second, that underlying these faulty misinterpretations are predisposing, enduring beliefs that become 'activated' when an unwanted mental intrusion occurs (Obsessive Compulsive Cognitions Working Group; OCCWG, 2003).

Although the shift to a more cognitive emphasis in the understanding of OCD was largely seen as positive, this also led to inconsistencies in the definition and assessment of cognition in OCD (OCCWG, 2003). In addressing this, an international group of researchers distinguished between appraisals and beliefs, defining appraisals as: 'ways in which meaning is given to a specific event such as the occurrence of an intrusion' and assumptions or beliefs as 'relatively enduring assumptions that are held by an individual and that are pan-situational rather than specific to a particular event' (OCCWG, 1997, p. 670). Two measures were also developed, the Obsessive Beliefs Questionnaire (OBQ) and the Interpretation of Intrusions Inventory (III). Finally, they identified six belief domains thought to be most relevant to OCD. These belief domains and their corresponding models will be considered in turn.

Overestimation of threat

Overestimation of threat is defined as 'an exaggeration of the probability or severity of harm' (OCCWG, 1997, p. 678). Examples include 'I believe the world is a dangerous place' (OCCWG, 2001). In one of the earliest cognitive accounts of OCD,

Carr (1974) proposed that obsessional states are characterised by abnormally high estimates of the probability that unfavourable outcomes will occur. Indeed, research has shown that people with OCD avoid risks (Steketee & Frost, 1994). Based on Carr's (1974) theory, McFall and Wollersheim (1979) suggested that in OCD threat is generated by a faulty primary appraisal in which the danger of an event is overestimated, and a secondary appraisal occurs in which individuals underestimate their ability to cope with the perceived threat.

Jones and Menzies (1997, 1998a, 1998b) tested this 'threat-based' model of OCD in a series of studies. Consistent with this account, the first study found danger expectancies the most likely mediator of washing-related behaviour in patients with OCD (Jones & Menzies, 1997). An experimental study in which the perceived level of danger was manipulated found that those in the high danger condition elicited greater anxiety and urge to wash than those in the low danger condition (Jones & Menzies, 1998a). Subsequently, Jones and Menzies (1998b) developed a treatment package for washers that targets danger-related cognitions. They found significant differences between a treatment group and a wait-list control from baseline to after treatment, but not from post-treatment to follow up. Govender et al. (2006) reported on the application of DIRT in the UK with one OCD patient, and found substantial reduction in symptom severity, which was maintained to six months post-treatment.

However, overestimations of threat are believed to be central to other emotional disorders, and for this reason this particular belief domain is thought to be relevant but not necessarily specific to OCD (OCCWG, 2003). For example, cognitive theory of panic disorder posits that bodily sensations are interpreted in a catastrophic fashion (Clark, 1997). Similarly, overestimating the threat of negative evaluation is argued to be common in social phobia (Clark & Wells, 1995). Consistent with this, research has shown that people with OCD did not differ in levels of threat estimation compared with anxious controls (OCCWG, 2003).

Inflated responsibility

Inflated responsibility is defined as the belief that ‘one has the power which is pivotal to bring about or prevent subjectively crucial negative outcomes’ (OCCWG, 1997, *p.* 677). Examples include ‘failing to prevent a disaster is as bad as causing it to happen’ (OCCWG, 2001). In the first comprehensive cognitive-behavioural model of OCD Salkovskis (1985) argued that people with OCD interpret otherwise ‘normal’ intrusive thoughts as an indication that they may be, or have been responsible for harm or its prevention. This is supported by research that has found the experience of unwanted intrusions is a common experience in the general population (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). Interpreting intrusive thoughts in this way is argued to increase discomfort, increase attention to further intrusions and their environmental triggers, increase accessibility to the original intrusion and lead to various behavioural responses which aim to escape or reduce the sense of responsibility, such as, neutralisation, compulsions, avoidance, reassurance seeking and thought suppression (Salkovskis, 1985, 1999, Salkovskis & McGuire, 2003). This, in turn, prevents the extinction of anxiety and disconfirmation of appraisal of the intrusion, leading to further preoccupation with and increase in the intrusions (Salkovskis *et al.*, 1998).

There is empirical support for the relationship between inflated responsibility and obsessive-compulsive phenomena. Research shows that self-report measures of responsibility appraisals and beliefs correlate with measures of obsessive-compulsive symptoms across clinical and non-clinical samples (OCCWG, 2001; 2003; Salkovskis *et al.*, 2000; Wilson & Chambless, 1999). Furthermore, studies have found that individuals with OCD score higher on measures of responsibility than non-clinical controls and individuals with other anxiety disorders (OCCWG, 2001, 2003; Salkovskis *et al.* 2000). Nonetheless, as association does not imply causation, it is possible that inflated responsibility could be a consequence of OCD itself (Salkovskis & McGuire, 2003). However, experimental studies in which the level of perceived responsibility is manipulated generally support the contention that increasing responsibility appraisals increases discomfort and neutralising behaviour in non-clinical samples (Ladouceur *et al.*, 1995), and that for OCD patients, decreases in

responsibility lead to decreases in discomfort, neutralising behaviour and checking urges (Lopatka & Rachman, 1995). Furthermore, Arntz *et al.* (in press) demonstrated that checking behaviour was significantly higher in people with OCD in a high responsibility condition compared with OCD patients, non-OCD anxious and non-clinical group. However, these experimental studies have several limitations. For example, Menzies *et al.* (2000) argues that manipulating responsibility also leads to changes in danger ratings, thus confounding the conclusions of the causal role of responsibility in OCD. Additionally, these studies only induced checking behaviour, and not other forms of OCD behaviour.

Other aspects of Salkovskis' model are problematic. Rachman *et al.* (1995) contends that responsibility is situation-specific, and some research supports this view. For example, although higher responsibility ratings in an OCD group for low-risk hypothetical situations compared with a socially phobic and anxious control group was found, consistent with the model, no differences in levels of responsibility for high-risk hypothetical situations were evident (Foa *et al.*, 2001). Furthermore, there is evidence that responsibility may not be a central feature of all OCD subtypes. People who experience contamination/dirt obsessions were found to rate responsibility appraisals significantly higher than for aggressive or sexual intrusions (Lee & Kwon, 2003). In a replication of Foa *et al.*'s (2001) study, responsibility was found to be elevated in checkers and not in non-checking OCD patients (Foa *et al.*, 2002). However, contrary to these findings, Cogle *et al.* (2006) found no evidence of this, suggesting that Foa *et al.*'s (2002) results were due to 'criterion contamination', as the measure used included scenarios related to checkers' concerns (p. 2).

Finally, some research directly contradicts Salkovskis' model. Sica *et al.* (2004) compared different belief domains in an Italian sample that contained individuals diagnosed with OCD, generalised anxiety disorder and non-clinical controls. They found that responsibility appraisals and beliefs had the lowest discriminant power across the three groups. Similarly, Tolin *et al.* (2006) found that an OCD group and anxious-control group differed from each other on measures of all belief domains except responsibility. In his review of the literature, Clark (2004) concludes that

although inflated responsibility has been shown to be apparent in obsessional symptoms, 'it's significance may be overstated in Salkovskis' formulation' (p. 100).

Perfectionism

Perfectionism is defined as the tendency to 'believe there is a perfect solution to every problem, that doing something perfectly (i.e. mistake free) is not only possible, but also necessary, and that even minor mistakes will have serious consequences' (OCCWG, 1997, p. 678). For example, 'if I can't do something perfectly, I may as well not do it' (OCCWG, 2001). McFall and Wollersheim (1979) suggested that beliefs about being 'perfectly competent' and that failing to live up to these perfectionist standards results in a heightened tendency to overestimate threat (p.335). Rasmussen & Eisen (1992) described OCD as being characterised by the core feature of incompleteness, which is the result of an inner sense of imperfection.

A number of studies have found a link between perfectionism and OCD. Using a non-clinical sample, Rheaume *et al.* (1995) found that perfectionism was moderately correlated with obsessive-compulsive symptoms after controlling for responsibility. Frost and Steketee (1997) found OCD patients scored higher in perfectionism than controls, however, patients diagnosed with panic or agoraphobia did not differ from OCD patients on overall perfectionism when compared with controls. Coles *et al.* (2003, 2005) have reported on the phenomenon of 'not just right experiences' (NJRE), or uncomfortable sensations of things not being just right hypothesised to lead to compulsions in order to achieve a sense of perfection. Using student samples they found that NJREs were more strongly correlated with features of OCD compared with other domains of psychopathology such as social phobia and depression (Coles *et al.*, 2003; 2005).

Similar to other belief domains, perfectionism is not specific to OCD. For example, OCD patients have been found not to differ from anxious controls on levels of perfectionism (OCCWG, 2001; 2003; 2005). Antony *et al.* (1998) compared different domains of perfectionism across anxiety disorders and found that the OCD group had significantly higher scores on 'doubts about actions', relative to the nonanxious controls, panic disorder and specific phobia groups. Social phobia was associated with

higher scores relative to nonanxious controls on the greater concern over mistakes, doubts about actions and parental criticism. In addition, panic disorder was also associated with concern over mistakes and doubts about actions, compared to controls. Perfectionism also overlaps with other belief domains. Bouchard *et al.* (1999) manipulated levels of responsibility in an experimental study. They found that people with high perfectionism reported more influence over and responsibility for negative outcomes when performing a task in the high responsibility condition than people with moderate perfectionism. Recently, Pleva and Wade (2006) found that perfectionism and responsibility was a significant predictor of obsessive-compulsive symptoms in a non-clinical sample, although responsibility emerged as the strongest predictor. Similarly, Yorulmaz *et al.* (2006) found that responsibility mediated the relationships between self-orientated and socially prescribed perfectionism and checking symptoms, and the relationship between socially prescribed perfectionism and cleaning symptoms in a non-clinical sample. Thus the contribution of perfectionism to OCD may operate through its influence on responsibility (Frost *et al.*, 2002).

Intolerance of uncertainty

Intolerance of uncertainty is defined as beliefs about 'the necessity for being certain, that one has a poor capacity to cope with unpredictable change, and that it is difficult to function adequately in ambiguous situations' (OCCWG, 1997, p. 678). For example, 'if something unexpected happens, I will not cope' (OCCWG, 2001). Rachman (2002a; 2002b) proposed that needing to achieve absolute certainty that a perceived threat has been adequately reduced or eliminated is crucial in producing checking symptoms. Sookman *et al.* (1994; 2001) suggested inflexibility with respect to uncertainty, newness or change represents a specific vulnerability schema underlying vulnerability to OCD.

Consistent with these hypotheses, research has found an association between intolerance of uncertainty and OCD symptoms. For example, Steketee *et al.* (1998) found that beliefs about certainty predicted symptoms after controlling for mood and worry, above all other belief domains measured, leading them to the conclusion that

intolerance of uncertainty may be central to OCD. In the OCCWG research it was found that the intolerance of uncertainty subscale of the OBQ was strongly correlated with other OCD measures (OCCWG, 2001). However, in a further study the subscale was found not to distinguish anxious controls from the OCD group (OCCWG, 2003), suggesting this particular belief domain may not be specific to OCD.

Intolerance of uncertainty has been argued to be a feature of other disorders, such as generalised anxiety disorder (Dugas *et al.*, 2004). In support of this, Holaway *et al.* (2006) found that compared to controls, people with OCD and generalised anxiety disorder showed higher levels of intolerance of uncertainty but the clinical groups did not differ significantly from each other. Doubting and checking symptoms were most related to intolerance of uncertainty, consistent with Rachman's (2002a; 2002b) theory. In a replication of these findings, Tolin, Abramowitz *et al.* (2003) found that OCD patients with checking compulsions showed greater intolerance of uncertainty than non-checkers and controls. However, the OCD group overall did not show greater intolerance of uncertainty compared with controls.

Importance of controlling one's thoughts

This belief domain is defined as the 'overvaluation of the importance of exerting complete control over intrusive thoughts, images, and impulses, and the belief that this is both possible and desirable (OCCWG, 1997, *p.* 678). Examples include 'having intrusive thoughts means I am out of control' (OCCWG, 2001, *p.* 1003). In their model of OCD, Clark and Purdon (1993; Purdon & Clark, 2002) argue that these beliefs result in preoccupation with unwanted thoughts, which results in efforts to control such thoughts. This model is based on research that has shown suppression of neutral thoughts (for example, 'white bears') paradoxically increases their frequency (Wegner *et al.*, 1987). This has subsequently been found to be a robust phenomena (Rassin *et al.*, 2000). Thus because control over thoughts is seldom ever reached, this is likely to cause significant distress in individuals who hold beliefs about the importance of controlling thoughts (Purdon & Clark, 1999, 2002). Efforts to control thoughts usually take the form of compulsive acts that serve to reduce anxiety (Purdon & Clark, 2002).

In support for this model, research has found a strong association between beliefs about the importance of controlling thoughts and obsessive-compulsive symptoms, showing that this belief domain is endorsed more by people with OCD than anxious controls (Tolin *et al.*, in press; OCCWG, 2001, 2003, 2005). Research has also found that people with OCD appraise negative intrusions as less controllable, more distressing and less acceptable than non-clinical controls (Calamari & Janeck, 1998), and that people with OCD are more likely to attribute failure to suppress a neutral thought to internal factors (e.g. I am mentally weak) than non-anxious controls (Tolin, Abramowitz, Hamlin *et al.*, 2002). Research investigating whether attempts to control thoughts in OCD produces paradoxical effects is equivocal (Shafran, 2005). Consistent with the model, Tolin, Abramowitz, Prezworski *et al.* (2002) found evidence for an increase in neutral thoughts during suppression attempts in people with OCD compared with non-clinical and anxious controls. However, other research has found no evidence of an increase in obsessional thoughts as a result of thought suppression in non-clinical individuals (Purdon & Clark, 2001) and people with OCD (Janeck & Calamari, 1999, Purdon *et al.*, 2005).

Over-importance of thoughts

Over-importance of thoughts is defined as the belief that ‘the mere presence of a thought indicates it is important’ (OCCWG, 1997, *p.* 678). For example, ‘having bad thoughts means I am likely to act on it’ (OCCWG, 2001). One of the main cognitive models of OCD is Rachman’s (1993, 1997, 1998) theory of obsessions. He proposed that obsessions were caused by ‘catastrophic misinterpretations of the significance of one’s intrusive thoughts/images/impulses’ (Rachman, 1997, *p.* 793). Rachman (1998) argued that people with OCD attach excessive importance to the content of their intrusive thoughts, and that intrusions only become obsessions if the content of the intrusion contradicts the person’s system of values. For example, if it is important to someone to be consistently kind and helpful, the experience of unwanted violent thoughts towards others would generate obsessional thinking if the intrusion is interpreted as signifying that the person really is potentially dangerous or evil (Rachman, 1998).

Rachman (1993) proposed that a factor involved in exaggerating the importance of thoughts was the metacognitive belief equating thought with action or thought-action fusion (TAF). Research has shown an association between TAF and obsessional symptoms, particularly likelihood TAF, which refers to the belief that thoughts can increase the likelihood of bad events occurring (see Shafran, 2005 for a review). However, in their review of the literature, Berle and Starcevic (2005) concluded that TAF also has a 'modest to moderate' relationship with other anxiety disorders and depression (p.280). For example, Rassin *et al.* (2001) found similar pre and post treatment scores on a TAF measure across anxiety disorders such as panic disorder, PTSD and social phobia.

In developing the meta-cognitive factors in OCD, Wells (1997) proposed a cognitive model of OCD. Based on the Self-Regulatory Executive Function (S-REF) model, obsessional thoughts are experienced as threatening due to metacognitive beliefs about the meaning of thoughts in general (Wells & Matthews, 1994). Beliefs concerning the importance or meaning and power of thoughts and beliefs regarding the need to control thoughts are emphasised in this model. These metacognitive processes then activate specific strategies for coping, in which the strategy selected will depend on the nature of the appraisal evoked by the intrusion. Finally, Wells (1997) argues that people with OCD tend to monitor their thought processes, or have heightened 'cognitive self-consciousness', which increases the detection of unwanted thoughts and can trigger intrusions. Indeed, research has found that OCD patients can be reliably differentiated from non-anxious controls on cognitive self-consciousness measures (Janeck *et al.*, 2003).

In a direct test of this model, Gwilliam *et al.* (2004) found that metacognitive beliefs were associated with measures of obsessional symptoms in a non-clinical sample, even after responsibility was controlled for. The authors concluded that the findings did not support the argument that responsibility is of central importance in OCD, as the association between OCD symptoms and responsibility statistically depended on meta-cognition (Gwilliam *et al.*, 2004). These findings were replicated in a later study in which it was concluded that 'the concept of responsibility may be too general as a

basis for understanding cognitive factors in obsessive-compulsive symptoms' (Myers & Wells, 2005, p.815). However, limitations of these studies were that only one measure of responsibility was used and the sample consisted of non-clinical participants.

Difficulties with cognitive appraisal models of OCD

Although cognitive appraisal models of OCD are argued to be the most promising theoretical explanations of OCD (Taylor *et al.*, 2006), various difficulties exist. First, the belief domains are highly correlated, which suggests that each domain may not be a distinct cognitive construct as currently theorised (Clark, 2004). For example, the OCCWG (2001, 2003) found belief domains measured by the first version of the OBQ, the OBQ-87, highly correlated with each other. The OCCWG (2005) later performed an exploratory factor analysis on the OBQ-87 in which three factors emerged: responsibility/threat estimation, perfectionism/intolerance of uncertainty and importance/control of thoughts. However, the three subscales were still moderately correlated in an OCD sample and had higher correlations in a combined anxious, community and student control sample (OCCWG, 2005). In contrast to this, Faull *et al.* (2004) conducted a principal components analysis on the OBQ-87 and found evidence for a single factor solution, leading to the conclusion that far from distinct, the belief domains may be manifestations of a more fundamental dysfunctional schema.

Second, the causal role of dysfunctional beliefs in producing symptoms has been questioned. If this relationship exists there must be evidence that OCD patients endorse these beliefs more strongly than patients with other anxiety disorders (Tolin *et al.*, in press). As reviewed above, empirical evidence for this is mixed, with many of the belief domains being found to be a feature of other anxiety disorders. Moreover, research into belief domains in OCD has mostly been cross-sectional in nature, thus faulty appraisals may be a consequence not a cause of OCD (Clark, 2004). To address this, Abramowitz *et al.* (2006) and Abramowitz *et al.* (in press) conducted a naturalistic longitudinal study that allowed an assessment of directional relationship hypothesised by cognitive models of OCD. Using the OBQ, levels of beliefs were

measured in (non-clinical) first time expecting parents pre and post-delivery. They found that negative appraisals of intrusive thoughts occurring one month following birth mediated the relationship between pre-birth obsessive beliefs and postpartum obsessive-compulsive symptoms. Although this study is limited by the use of a non-clinical sample, it provides evidence that dysfunctional beliefs have a causal role in the development of symptoms.

Third, there is evidence to suggest that certain beliefs are only evident in particular symptom subtypes of OCD, although some have argued this is premature given the observed high associations of different belief domains (Faull *et al.*, 2004). This is consistent with the growing evidence that OCD is not a unitary syndrome, but rather a heterogeneous disorder (for a review see Taylor *et al.*, 2005). For example, Tolin, Woods *et al.* (2003) found that threat estimation was associated with checking, hoarding, neutralizing, obsessing and washing symptoms, overimportance of thoughts was associated with neutralizing, control of thoughts with obsessions and perfectionism with ordering symptoms. Calamari *et al.* (2006) found symmetry symptoms to be associated with perfectionism/certainty belief domains.

Fourth, there is also evidence to suggest that for some OCD patients, dysfunctional beliefs play a limited role in the aetiology and maintenance of symptoms. Taylor *et al.* (2006) conducted a cluster analysis on the OBQ collected from a clinical sample and found two cognitive subtypes. One subtype was characterised by relatively high scores compared to the control group on measures of beliefs domains, whereas the other subtype showed approximately *normal* levels of dysfunctional beliefs. These results were subsequently replicated by Calamari *et al.* (in press) who concluded that these findings highlight the importance of developing an idiographic profile of belief domains most relevant to patients' symptoms in order to maximise the efficacy of interventions.

Fifth, the cognitive appraisal model of OCD asserts that modifying faulty appraisals and beliefs will lead to a reduction in symptoms (Clark, 2005). However, in a systematic review of 17 randomised controlled trials it was concluded that whilst there

is evidence that the behaviour therapy is an effective treatment for OCD, no evidence was found that cognitive therapy is more or less effective than behaviour therapy alone (NICE, 2005). In addition, when standardised methodology for defining clinical significant change was applied to the data sets of five outcome studies, behaviour therapy emerged as the most effective treatment compared with cognitive therapy, with an improvement rate of 75% compared with 53% for cognitive therapy (Fisher & Wells, 2005). Thus despite the theoretical developments in the cognitive factors involved in OCD, it is still unclear why treatments based on behaviour change are more effective than interventions focused on cognitive change.

Finally, there is little understanding of the initial development of these beliefs domains, perhaps because of the prevailing view that it is most useful to concentrate on the maintaining factors of OCD, as this invariably is the target of treatment (Shafran, 2005). Salkovskis *et al.* (1999) suggested several developmental origins that may serve to inflate responsibility. For example, a childhood characterised by strict and rigid codes of conduct and duty, or experiences in which an early developed and broad sense for responsibility is either deliberately or implicitly promoted. However, as yet these hypotheses have not been tested empirically. Rachman (1997) hypothesised that individuals who learn (or are taught) that value-laden thoughts are significant are vulnerable to developing obsessions. Similarly, Shafran and Mansell (2001) suggest that overly critical and demanding parents, excessive parental expectations and indirect criticism, experiences where parental approval is either absent, inconsistent or conditional may contribute to the development of perfectionism.

Conclusions and suggestions for future research

As reviewed, many difficulties are apparent with the cognitive appraisal model of OCD. Belief domains have been shown to be inter-correlated and not distinct constructs. Clinically this implies people with OCD hold several different beliefs rather than one single belief. Current cognitive appraisal theories cannot explain this, as most emphasise only one belief domain. This lack of distinctiveness is also problematic for the argument that each belief domain develops from particular early

experiences. It is possible that this overlap points to a more generic cognitive system, for example, an underlying dysfunctional schema (Faull *et al.*, 2004). Alternatively, the methods used to measure such beliefs may lack construct validity. Indeed, introspective self-report questionnaires are argued to be highly flawed in revealing the cognitive causes of behaviour, which are argued to be most likely out of awareness (McNally, 2001). Clearly further research is needed to further investigate the specificity of these belief domains.

It is argued that the cognitive appraisal model of OCD is problematic as it does not explain why people who endorse such beliefs are motivated to engage in compulsive behaviours (O’Kearney, 1998). In response to this, Salkovskis & Freeston (2001) argue that perception of threat is the central issue in OCD (as in other anxiety disorders). They argue that people in general are highly motivated to avoid threat, and in OCD, the person is motivated to avert the threat of being personally responsible for some harm (p.6). However, as Bhar (2004) points out, the reasons behind the motivation to avoid threat is not clear from this account, for example, ‘why would it matter to the person if they are irresponsible?’ (p.87).

It has been suggested that people with OCD are motivated to avoid threat that contradicts a person’s value system and how they view themselves (Rachman, 1998; Purdon & Clark, 1999). Thus, it would only matter to a person if they experienced an intrusion that implied irresponsibility *if it was important to them to be responsible*. Rowa *et al.* (2005) found that obsessions rated as more upsetting were evaluated as more meaningful and more contradictory of valued aspects of the self than less upsetting ones. The role of the self-concept in OCD was first introduced by Guidano and Liotti (1983). Drawing on attachment theory, they argued that OCD emerges from an early experience of attachment relationships that supply the child with two opposing interpretations of self and reality, leading to a dichotomous self-concept (Guidano & Liotti, 1983). This causes extreme anxiety and leads to a need for a non-contradictory image of self, perfectionism and compulsive behaviours emerge as a means to resolve these feelings of ambivalence (Guidano & Liotti, 1983). Clark (2004) proposed that people vulnerable to developing OCD have a pre-existing

ambivalent or uncertain self-view, thus unwanted intrusive thoughts that are completely contrary to core elements of this ambivalent self are more likely to be interpreted as highly significant and threatening. The empirical support for these hypotheses is very limited. Only one study has investigated attachment in OCD, and found that people with OCD reported more insecure attachments than a control group (Myhr *et al.*, 2004). One study also found that people with OCD show higher self-ambivalent self-concepts than non-clinical controls (Bhar, 2004). Clinically this implies that interventions aimed at increasing coherence or certainty of the self-concept may have the effect of reducing the significance placed on unwanted intrusive thoughts. Given the limited evidence base for purely cognitive interventions for OCD, this could prove to be an important area for future research.

In conclusion, the cognitive appraisal model of OCD has greatly developed the understanding of OCD. However, aspects of the theory are problematic, and this is reflected in the research literature. This review has identified that current knowledge of the developmental precursors to the beliefs thought to underlie OCD is limited, and represents an area for further research. As discussed, the role of the self-concept in the pathogenesis of OCD is a promising area for the development of theory and empirical knowledge, which may have implications for the treatment. Further research is needed to determine whether people with OCD have a particular self-concept structure that is characterised by uncertainty and ambivalence, and whether this is indeed linked to a particular attachment experience as hypothesised. Finally, the hypothesised relationship between attachment experiences, self-concept, obsessive-compulsive symptoms and beliefs has not been tested empirically and could be addressed by future research.

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Appendix 1 Search strategy procedure

Search process

Initial ideas and broad search

The search process began with an initial interest in OCD from a cognitive perspective, based on previous experience of using the cognitive model therapeutically. At this stage key textbooks were read to gain background information on the topic. This enabled more information to be gained on the cognitive models of OCD mainly from a theoretical point of view. From this reading, key authors and their original theoretical papers/books were identified and read. Ideas for a potential focus of the literature review were then discussed with supervisors.

Focus of ideas and systematic search

Following this, the search became more focussed and electronic databases were systematically searched (see below). In addition, website, citation and reference searches were conducted (see below). This enabled identification of relevant research and theoretical developments since the original papers had been published. Through this process, gaps in both the empirical and theoretical literature were identified.

Ensuring correct gaps in the knowledge base existed

As some time had passed since the first search, and to check the gaps in knowledge that had been identified still existed, a second systematic search as described above took place by restricting the search to the previous year. In addition, the 'articles in press' sections of key journals (for example, Journal of Anxiety Disorders, Behaviour Research and Therapy, Cognitive Therapy and Research) were also searched.

Database search

Below is a list of all the databases used for the literature search:

- PsycINFO
- Pubmed

- National Research Register (a register for current and recently published research in the National Health Service. Several researchers conducting research relevant to the literature search were identified and contacted).
- Cinahl (Cumulative Index to Nursing & Allied Health Literature)
- Cochrane Library.
- Zetoc (provides access to the British Library's table of contents. An email 'alert' was set up to ensure that new articles and papers were identified).
- SIGLE (System for Information on Grey Literature).

Search terms

Below is a list of the search terms used, grouped into categories for description purposes.

- Obsessive compulsive disorder, OCD, obsessions, compulsions, obsessive neurosis
- Cognitive models of OCD, cognition, cognition in OCD, cognitive appraisal model, beliefs, beliefs in OCD, belief domains, intrusive thoughts, intrusions, appraisals, thoughts, schema
- OCD subtypes, heterogeneity of OCD, epidemiology of OCD
- Inflated responsibility, responsibility in/and OCD
- Threat, overestimation of threat, threat-based models of OCD, danger estimates
- Intolerance of uncertainty, tolerance of uncertainty, uncertainty
- Control of thoughts, thought control, thought suppression
- Perfectionism, perfectionistic, perfectionistic beliefs
- Overimportance of thoughts, importance of thoughts, importance of beliefs, thought-action fusion, TAF
- Obsessive beliefs questionnaire, OBQ
- Development of OCD, aetiology of OCD, early experience
- Attachment, attachment style, attachment security
- Self, self concept, self concept clarity, self concept certainty, self esteem, self-view, ambivalent self

- Cognitive therapy, CT, cognitive behaviour therapy, CBT, treatment of OCD, OCD interventions, therapy

Specific searching procedures

As a number of databases were used, each search term was entered into the databases in turn. In all searches a combination of free text (i.e. the actual search term) and MeSH terminology were used. MeSH terminology allowed identification of references that used different terminology for the same concept. To exclude irrelevant references limits were used, such as limiting references to English journals, and the Boolean AND as well as NOT operators were used. To ensure all relevant references were included, the truncation technique (i.e. putting an asterisk at the end of the word) was used to include different forms of each search term, such as the plural of the word, in addition, the Boolean OR operator was used to broaden the search.

Website searches

The Internet was utilised and search engines used including Google (www.google.com) and Google Scholar (www.scholar.google.com). Service user websites were also searched (for example, www.ocdaction.org.uk, www.ocduk.org). Finally, the Department of Health's website (www.doh.gov.uk) was searched and enabled current guidelines concerning OCD to be found.

Author relevant searches

The names of most relevant authors were searched within the above databases. In addition, their names were searched on the Internet as above, which enabled some personal web pages to be found (for example, within academic institutions) that showed publication lists. These publication lists were cross-referenced with the literature already obtained to ensure that no key references were missing.

Reference searches

Using the reference lists of the obtained articles proved useful in identifying further relevant papers. Reference lists were also checked in the latter stages of the search to ensure all relevant literature had been obtained.

Citation searches

Web of Science ISI Citation Indexes were used to find all publications by key authors and enabled the identification of other journal articles and authors that had cited the literature already obtained. The citation search was particularly useful in the checking stage of the search to ensure all relevant literature had been found.

**ATTACHMENT SECURITY, SELF-CONCEPT CLARITY
AND BELIEFS IN OBSESSIVE-COMPULSIVE
DISORDER**

ELIZABETH MAY

**A thesis submitted to the University of Hertfordshire in
partial fulfilment of the requirements of the degree of Doctor
of Clinical Psychology**

MAY 2007

24988 WORDS

I would like to thank Nick for everything he has done to support me emotionally and practically throughout the whole of my training, but in particular during the completion of this research. Above all I appreciate him putting on his clinical psychologist hat at the weekends to read through my work and help develop my thinking around various issues. He has been my rock through it all. Thank you to Barbara Mason who supervised the early stages of the project. I am grateful to Steve Davies who stepped in to supervise the project in the latter stages. His ability to contain my anxiety about the write up was much appreciated. I am much indebted to Jorg Shultz for his help with the statistical analysis. Finally, thank you to all the people who took the time to fill in a questionnaire. I would not have learnt so much from conducting this research without them.

ABSTRACT

Cognitive models of obsessive-compulsive disorder (OCD) suggest that an ambivalent self-concept and dysfunctional beliefs play an important role in the pathogenesis of OCD. Early attachment experience is argued to be the main process through which such ambivalent self-representations develop. The current study investigated self-concept clarity, a broader construct than ambivalence, attachment security, obsessive-compulsive (OC)-relevant beliefs and their relation to OC symptoms. Forty four people who reported experiencing OC symptoms were compared to 34 individuals who reported no mental health difficulties. People who experienced OC symptoms exhibited significantly less self-concept clarity, less attachment security and higher levels of OC-related beliefs. Once levels of depression were controlled for, no significant relationship between attachment security and self-concept clarity was found in the OCD group. OC symptoms were not significantly correlated with self-concept clarity in the OCD group, although significant negative relationships were found between self-concept clarity and specific OC symptoms. Evidence was found to support the notion that OC-relevant beliefs mediate the relationship between self-concept clarity and OC symptoms, in addition to mediating the relationship between attachment anxiety and OC symptoms. Implications for attachment theory and cognitive models of OCD are discussed, along with clinical and research implications.

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1. INTRODUCTION

1.1 Obsessive-compulsive disorder (OCD)

1.1.1 *Definition and phenomenology*

Obsessive-compulsive disorder (OCD) is characterised by obsessions and/or compulsions. Obsessions can be defined as ‘persistent ideas, thoughts, impulses or images that are experienced as intrusive and inappropriate and that cause marked anxiety or distress’ (American Psychiatric Association; APA, 1994, p.418). Compulsions can be defined as ‘repetitive behaviours (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) the goal of which is to prevent or reduce anxiety or distress’ (APA, 1994, p.418). The diverse nature of the clinical presentation of OCD is frequently discussed in the literature (Clark, 2005). The most commonly reported symptoms include contamination concerns with compulsive cleaning or washing, obsessive doubt and checking rituals, concerns about symmetry, orderliness and obsessions concerned with numbers, and hoarding or collecting rituals (Lochner & Stein, 2003).

As well as variability in symptoms, OCD also varies with respect to patterns of comorbid conditions, gender, insight, age of onset and course (Lochner & Stein, 2003). For example, there is no typical mode of onset associated with OCD, and symptoms can be experienced gradually, acutely or in response to particular life events (Clark, 2004). Furthermore, although men and women are equally affected by OCD, women are more likely to experience contamination fears and washing/cleaning rituals (Tallis, 1995). This observed heterogeneity of OCD has led researchers to subtype OCD patients according to different criteria such as different symptom types. Subtyping in this way assumes that each subtype is a separate disorder, with differing phenomenology, causes and treatment (Mataix-Cols, 2006).

Across studies, the *contamination/washing subtype* has emerged most reliably whereas less consistency has been observed for *hoarding*, *harming/checking* and *symmetry subtypes* (Clark, 2005). However, others advocate a multidimensional approach instead which views OCD as a spectrum of multiple, potentially overlapping

syndromes that are continuous with 'normal' obsessive-compulsive (OC) phenomena (Mataix-Cols *et al.*, 2005; Mataix-Cols, 2006). Consequently, researchers are increasingly investigating the processes that may underlie symptom differences such as faulty appraisals and OC-related beliefs (Calamari *et al.*, 2006).

1.1.2 Overview of the cognitive models of OCD

1.1.2.1 Behavioural conceptualisations

Interest in the cognitive model of OCD emerged from an attempt to address the limitations of the behavioural approach, the prevailing method of understanding and treating OCD until only relatively recently (Clark, 2004). The behavioural model of OCD is based on Mowrer's (1939, 1960) two-stage theory of fear acquisition and maintenance. In the first stage, obsessional fears develop due to a neutral event becoming associated with fear by immediately becoming paired with an anxiety-provoking stimulus. In the second stage any actions that relieve the obsessive fear or discomfort are negatively reinforced, as these stop the unpleasant event and are thus likely to be repeated in the future (Steketee, 1993). Following this model, treatment involves exposing the individual to the feared situation and preventing any compulsive rituals or behaviour that alleviates the discomfort, or, exposure/response prevention (ERP) (Steketee, 1993). Although studies support the effectiveness of ERP (Steketee & Frost, 1998), problems with this type of treatment remain. For example, drop out rates are typically high which is possibly due to the distressing nature of the exposure tasks (Abramowitz *et al.*, 2005).

1.1.2.2 Cognitive conceptualisations

Cognitive models of OCD can be broadly divided into appraisal and deficit models. The *appraisal model* dominates theory, research and practice and emphasises thought content in producing symptoms (Clark, 2004). In contrast, the *deficit model* broadly emphasises abnormalities in cognitive processing.

1.1.2.2.1 Cognitive deficit approaches

Many cognitive deficit accounts of OCD exist. For example, researchers have investigated whether people with OCD exhibit impairments in memory or deficits in

their ability to dismiss or attend to extraneous mental stimuli (Abramowitz, 2006). In a review of the literature, Muller and Roberts (2005) concluded that the evidence for an overall memory deficit was inconclusive, but that there was strong evidence for a lack of confidence in memory in OCD. In addition, there is some limited evidence for reduced cognitive inhibition and attentional biases to threatening information (Muller & Roberts, 2005). Cognitive deficit accounts have been criticised for their inability to account for the heterogeneity of OCD and the apparent effectiveness of ERP (Abramowitz, 2006). It is perhaps because of these limitations that cognitive appraisal accounts have had a greater impact on the treatment of OCD (Clark, 2004).

1.1.2.2.2 Cognitive appraisal approaches

The central premise of the appraisal model of OCD is that obsessions and compulsions originate from ‘normal’ experiences. Indeed, research has found that a high proportion of the general population report unwanted, intrusive thoughts (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). This finding also extends to ritualistic behaviour, and research has shown that over 50% of the population exhibit ritualistic behaviour although this tends to be less intense, frequent and associated with less negative affect (Muris *et al.*, 1997).

The cognitive appraisal model proposes that people who experience OCD develop symptoms because they interpret their unwanted, intrusive thoughts as highly significant or threatening. This is based on Beck’s (1976) model of emotional disorders which posits that psychopathology results from maladaptive beliefs concerning the self, the environmental context and the future. Appraising such thoughts in this way leads to attempts to control the thought or neutralise the distress associated with it (Wells, 1997). It is thought that underlying these faulty misinterpretations are predisposing, enduring beliefs that become ‘activated’ when an unwanted mental intrusion occurs (Obsessive Compulsive Cognitions Working Group; OCCWG, 2003). The OCCWG (1997) has described six categories of OC-related, dysfunctional beliefs: inflated responsibility, overimportance of thoughts, overestimations of threat, perfectionism, intolerance of uncertainty and importance of controlling one’s thoughts. They also developed the Obsessive Beliefs Questionnaire

(OBQ) that enables the measurement of these beliefs (OCCWG, 2001). Currently, several cognitive appraisal models of OCD exist, and each emphasises different belief domains in the pathogenesis of OCD.

In a literature review, May (2006) highlighted several difficulties with the cognitive appraisal models of OCD. Firstly, little is known about what predisposes an individual to misinterpret their intrusive thoughts as threatening or what the developmental precursors are to the formation of the underlying dysfunctional beliefs. Secondly, the motivational factors underlying compulsive behaviours are unclear within the cognitive appraisal account. It has been suggested that people are motivated to engage in compulsions because the intrusion contradicts perceived valued aspects of themselves (Rachman, 1998; Purdon & Clark, 1999). This has led some to explore the role of the self-concept in the pathogenesis of OCD, and have linked this to the role of attachment processes in producing a particular self-structure characterised by ambivalence and uncertainty (Guidano & Liotti, 1983; Clark, 2004). However, as very few empirical studies have been conducted, this has been identified as an area for further research (Doron *et al.*, 2006).

1.1.3 Rationale for the study

There is a need to further the understanding of the role of the self-concept and attachment in OCD, which this study will attempt to do. First, relevant theoretical and empirical literature regarding the self-concept will be discussed. Following this the attachment literature will be considered, with a particular emphasis on the link with mental health. Theoretical approaches that draw on attachment and self-concept theory to explain the development of OCD will then be examined. Finally, the aims of the current study will be presented.

1.2 The self-concept

1.2.1 Definition and theoretical issues

There is no universally accepted definition of the term 'self-concept' (Byrne, 1996). A further difficulty is that some self terms are used interchangeably to refer to the same underlying construct, whereas others are used to refer to significantly different

constructs (Bhar, 2004). For example, some of the terms which have been used interchangeably with the term 'self-concept' include self-image, self-representation, self-schema, and self-identity. For the purposes of this study, the term 'self-concept' will be used to denote the attitudes, feelings and beliefs one has about oneself (McReynolds *et al.*, 2000).

Self-concept research and theory has undergone a significant shift in the last two decades (Markus & Wurf, 1987). Traditionally, the self-concept was understood as a unitary, monolithic entity and research often focused on the evaluative component of the self concept - self-esteem (Campbell *et al.*, 2000). However, current conceptualisations of the self-concept consider it both multidimensional and dynamic in nature (Markus & Wurf, 1987). It is argued that the self-concept is dynamic in the sense that it provides the means for interpreting and organising self-relevant actions and experiences, provides the rules and scripts for behaviour and adjusts in response to the social environment (Markus & Wurf, 1987). Typically, theorists and researchers view the self-concept as cognitive in nature, consisting of a set or collection of images, thoughts, attitudes, schemas or theories (Markus & Wurf, 1987). Across theoretical traditions, it is generally agreed that during the course of development, a concept of the self is established in memory and is constructed through interactions with the social environment (Stein & Markus, 1994; Demo, 1992).

A distinction can be made between the structure and contents of the self-concept. The contents of the self-concept generally refer to beliefs about the self and self-evaluations, such as beliefs about physical attributes and abilities. The structure of the self-concept refers to how these beliefs are organised (Campbell *et al.*, 2003). The organisational properties of the self-concept are increasingly being recognised as an important focus for clinical theory and research, as cognitive structure is argued to shape emotional and behavioural responses to events (Stein & Markus, 1994; Rafaeli-Mor & Steinberg, 2002).

1.2.2 Structure of the self-concept and its relationship to mental health

Structural aspects of the self-concept have been implicated in various theories of psychopathology. In particular, the question of whether having a coherent, unified and *integrated* self-concept or a *differentiated* self-concept, with multiple self-aspects enhances psychological well-being (Stein & Markus, 1994; Campbell *et al.*, 2003). Several types of self-concept structure have been proposed that either emphasise differentiation such as self-complexity, or integration, such as self-discrepancies and self-concept clarity.

1.2.2.1 Differentiation of the self-concept

Differentiation of the self-concept refers to ‘the degree of pluralism in the structure, the number of different facets or dimensions an individual spontaneously uses in thinking about the self’ (Campbell *et al.*, 2000, p.68). Linville (1985) argues that the complexity of self-representations is important in maintaining mental health. Greater self-complexity refers to the organisation of self-knowledge into a number of aspects in addition to maintaining greater distinctions among self-aspects (Linville, 1985). Linville (1985) argues that greater self-complexity buffers against the effects of stress by preventing negative events from ‘spilling over’ into the unaffected other aspects or representations of the self. For example, a university student fails an exam and has a simple self-representation in which academic aspects of the self are closely linked in memory to social and family aspects. The negative affect and self-appraisals associated with the failure will be widespread, resulting in negative feelings about other areas of the self. With a more complex self-structure where distinctions among the self-aspects are maintained, the academic failure is less likely to affect the other aspects of the self. Some studies have found support for this hypothesis (Linville, 1987, 1985). However, other studies have found limited support (Rafaeli-Mor & Steinberg, 2002).

1.2.2.2 Integration of the self-concept

In contrast to differentiation, the integration of the self-concept refers to the ‘degree of unity in the structure’ (Campbell *et al.*, 2000, p.68), and it is this aspect of the self-concept that has been implicated in the development of OCD. Developing a coherent

and unified self-concept has been highlighted as an important task of cognitive and emotional development (Harter, 1990). Indeed, some theories of psychopathology have emphasised the role of conflicting or discrepant beliefs about the self in producing negative affect and psychopathology (Bhar, 2004). For example, Kernberg (1984) argues that personality disorders are characterised by an inconsistent and thereby incoherent personality structure, resulting in multiple, contradictory representations of self. Similarly, Kohut (1971, cited in Mollon, 2001) views psychosis as regression to the developmental stage of the fragmented self.

Research has found that non-clinical individuals who exhibited poor self-concept integration had higher scores on measures of depression and anxiety (Donahue *et al.*, 1993). Similarly, Higgins (1987; 1989) argues that a self-concept characterised by discrepant self-beliefs is associated with negative emotional states. Consistent with this hypothesis, Strauman and Higgins (1988) found that a discrepancy between an individual's perception of their actual attributes and their ideal attributes was associated with depression. In contrast, a discrepancy between an individual's perception of their actual attributes and the attributes that they perceived others would believe they should possess was associated with anxiety.

1.2.2.2.1 Self-concept clarity

The structural construct that is most relevant to current theories that propose OCD may involve an ambivalent or uncertain self-concept is self-concept clarity. Campbell *et al.* (1996) defined self-concept clarity as the extent to which the contents of the self-concept are 'clearly and confidently defined, internally consistent and temporally stable' (p.141). Therefore an individual who has low self-concept clarity will have self-beliefs that are uncertain, unstable and inconsistent (Campbell *et al.*, 1996). Campbell *et al.* (1996) describe self-concept clarity as overlapping with other self-concept constructs but as being theoretically independent of the contents of the self-concept, such as self-esteem. This overlapping of the self-concept clarity construct is reflected in the OCD literature. For example, the terms 'ambivalent self-concept' (Guidano & Liotti, 1983) or 'self-ambivalence' (Bhar, 2004) are also used. However, clarity is argued to be a broader construct than ambivalence as ambivalence is more

concerned with the notion of an individual having both positive and negative self-beliefs (Riketta & Zigler, 2006). This relates to the self-concept encompassing only a *specific* facet of clarity, that is, inconsistency (Riketta & Ziegler, 2006). Indeed, across two factor analytic studies a measure of self-concept clarity (Campbell *et al.*, 1996) was found to tap into broader constructs than a measure of self-ambivalence (Riketta & Ziegler, 2006).

There is evidence that greater self-concept clarity is associated with psychological well-being. In a series of studies using undergraduate students, Campbell (1990) found that individuals with low self-esteem showed less confidence in self-ratings on pairs of opposite trait adjectives. They also demonstrated more change in their self-descriptions over a two month period, and less consistency in their responses to whether or not pairs of opposite trait adjectives were true of them. Baumgardner (1990) found that students who exhibited low self-esteem were less certain about possessing various personality traits, and that it was increases in certainty rather than accuracy that led to increases in positive self-affect. Baumgardner (1990) suggested that perceptions of self-certainty may contribute to a sense of control, particularly over future outcomes.

A criticism of research that asks respondents to rate themselves on various traits is that some or all may not be relevant to their self-concepts (Story, 2004). Campbell *et al.* (1996) developed a self-report measure of self-concept clarity (Self-Concept Clarity Scale, SCCS) and replicated previous research that demonstrated the self-esteem-clarity association. This study also showed that low self-concept clarity was associated with high neuroticism, low conscientiousness, low agreeableness and chronic self-analysis, after controlling for self-esteem. These findings have been replicated in an Estonian sample, indicating the self-concept clarity construct is generalisable across different Western cultures and languages (Matto & Realo, 2001). Smith *et al.* (1996) found that students with higher self-concept clarity demonstrated lower levels of depression, anxiety, perceived stress, higher self-esteem and engaged in more active coping styles than those with lower scores. Stucke and Sporer (2002) established a link between clarity and anger. They found that individuals who scored

high on a narcissism measure and who had low self-concept clarity, experienced the most anger following experimentally induced failure. Similarly, Lawrence (2006) found that students with lower levels of self-concept clarity were more likely to report high levels of aggression in response to situations where a lack of control was experienced compared with situations where they were provoked by others.

Only two studies have explored self-concept clarity in clinical samples. Bigler *et al.* (2001) investigated self-concept clarity in 31 in-patients diagnosed with schizophrenia and found that low self-concept clarity was associated with higher levels of depression and anxiety. In two experimental studies, Wilson and Rapee (2006) compared self-concept certainty in people diagnosed with social phobia with non-psychiatric controls. The first study found that after controlling for depression, people with social phobia had significantly higher ratings for negative attributes (for example, boring, selfish, lazy) and lower ratings for positive attributes (for example, attractive, honest, kind). Their confidence in whether they possessed various positive and negative attributes was lower than the confidence ratings of the control group. To control for the possibility that this result was not due to low levels of confidence in making decisions generally, a second study used the difference in reaction times for deciding whether particular trait adjectives were descriptive of them, or whether the traits were generally a positive attribute, as a measure of self-concept certainty. It was found that individuals with social phobia exhibited greater reaction times for making yes/no decisions about whether particular attributes were self-descriptive, relative to reaction times for making general decisions about trait adjectives, thus indicating less self-concept certainty than controls. These findings are consistent with models of social phobia that propose social phobia is characterised by instability of self-schema (Wilson & Rapee, 2006).

1.3 Attachment

1.3.1 Attachment theory

1.3.1.1 Origins of Attachment theory

The central thesis of attachment theory is that human beings form close emotional bonds in the interest of survival, and that from infancy, an attachment-behavioural

system operates in order to regulate proximity to the caregiver (Bowlby, 1969). Bowlby (1973) proposed that individuals develop internal working models, or internal representations, of the self and others through interactions with caregivers. Internal working models contain emotional, behavioural and information-processing components, allowing for the prediction of others' behaviour and planning of behavioural responses to these predictions (Zimmerman, 1999). Internal working models are also thought to contain memories of attachment-related experiences and attachment related goals and needs (Collins & Read, 1994). The content of an individual's internal working models are hypothesised to be largely determined by the caregiver's emotional availability and responsiveness to the child.

Bowlby (1973) proposed that internal working models of the self contain the notion of 'how acceptable or unacceptable he himself is in the eyes of his attachment figures', and that internal working models of the world or others contain the notion of 'who his attachment figures are, where they may be found, and how they may be expected to respond' (p.236). Therefore children with attentive, attuned and consistently responsive caregivers should develop models of themselves as loveable and others as responsive and trustworthy, whereas children with unresponsive or unpredictably responsive and inconsistent parents are predicted to develop models of self as unworthy (of care/love) and models of the others as unpredictable (Collins & Read, 1994).

Ainsworth *et al.* (1978) operationalised Bowlby's (1969, 1973) theory by developing the Strange Situation, a laboratory procedure involving separations and reunions between the caregiver and the infant. Ainsworth *et al.* (1978) categorised three main attachment patterns using this method. Securely attached infants displayed some distress when separated from their mothers and greeted her eagerly on her return. Avoidant infants were minimally distressed by their mothers' departure and appeared to ignore her when she returned. Ambivalent or resistant infants became extremely distressed by their mother's departure and although they sought contact on her return, they had difficulty settling down and appeared to still be distressed. Main and Solomon (1986, 1990) later reviewed a large number of infants that appeared

unclassifiable and developed criteria for identifying a fourth attachment pattern, disorganised/disorientated. This attachment style is characterised by conflicted and chaotic behaviour in the Strange Situation, indicating these children do not have a coherently organised strategy of managing arousal in the context of attachment relationships (Shorey & Snyder, 2006).

1.3.1.2 Adult attachment

Bowlby considered attachment to be a life-long construct (Bowlby, 1977). The 1980s heralded a move towards understanding and measuring attachment within adult relationships. Hazan and Shaver (1987) were the first to apply attachment theory to the understanding of how early attachment histories may influence a person's later close relationships. They argued that the functions and dynamics of the attachment behavioural system were virtually the same across the life span. In addition, Hazan and Shaver (1987, 1994) argued that individual differences in adult attachment relationships are a reflection of the beliefs and expectations that individuals have formed about themselves and their close relationships on the basis of their attachment histories. They hypothesised that the major patterns of attachment observed by Ainsworth *et al.* (1978) corresponded to three distinct types of romantic attachment and developed a self-report measure that enabled measurement of adult attachment styles. Indeed, Hazan and Shaver (1987) found that individuals classified as insecure reported more negative experiences and beliefs about love, a history of shorter romantic relationships and less favourable descriptions of their childhood relationships with parents than securely attached individuals.

Hazan and Shaver's (1987) three category model was criticised for conflating two theoretically distinct forms of avoidance (Fraley & Shaver, 2000). Bartholomew (1990) argued that two types of avoidance existed: fearful avoidance in which close attachment to another is desired but avoided through fear of intimacy, and dismissing avoidance in which a defensive sense of self-reliance and independence is maintained. This led Bartholomew (1990; Bartholomew & Horowitz, 1991) to propose the four-category model of individual differences in adult attachment (Figure 1).

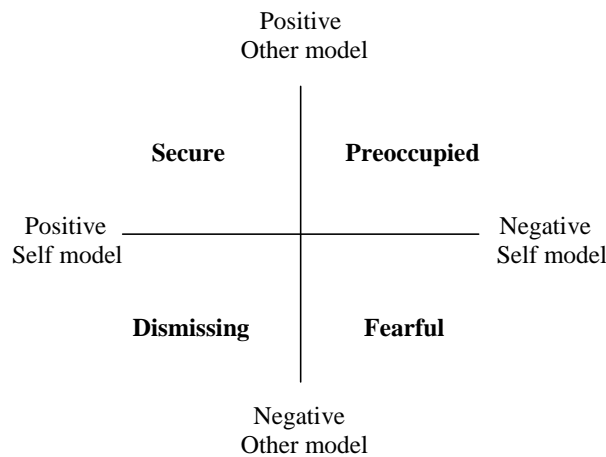


Figure 1. Four-category model of adult attachment (Griffin & Bartholomew, 1994)

Bartholomew (1990; Bartholomew & Horowitz, 1991) organised patterns of adult attachment in terms of the intersection of models of self and other, thus each model defines one of four attachment styles. According to this, secure attachment is characterised by a positive model of self and a positive model of other. In contrast, a positive model of other and negative model of self characterise a preoccupied attachment style. This style is thought to arise from persistent experience of inconsistent and insensitive parenting, leading the child to explain this inconsistency as indicative of their unworthiness and a desire to constantly seek approval from others (Bartholomew, 1990; Griffin & Bartholomew, 1994). Individuals with this attachment style may have a less certain view of themselves, and may interpret many situations as a threat to their sense of self (Pietromonaco & Barrett, 2000).

The bottom two cells of the model contain the attachment styles hypothesised to result from psychologically unavailable or rejecting early attachment figures. These two styles share a negative model of others, thus have a low expectation of others to be available or supportive. However, fearful individuals hold a negative self model, leading to dependency on others for validation of their self-worth. Due to their negative expectations of others, they actively avoid intimacy to avoid the pain of

potential loss or rejection. Dismissing individuals also avoid closeness due to their negative expectations of others, but defensively deny the value of close relationships and stress the importance of independence, thus maintaining a positive self-image (Bartholomew, 1990; Griffin & Bartholomew, 1994).

Several limitations of the categorical measurement of adult attachment have been highlighted in the literature. For example, the categorical approach has been criticised for assuming that variation between individuals within a particular category is unimportant or does not exist (Crowell *et al.*, 1999; Shemmings, 2004). In a large study, Fraley and Waller (1998) used taxometric analyses to examine whether attachment data best fitted latent types or latent dimensions. They found that the data was more consistent with a dimensional model of attachment. In order to identify the optimal dimensional system, Brennan *et al.* (1998) conducted a large factor analytic study of all existing self-report measures of adult romantic attachment. They found that individual differences in attachment could be organised into a two dimensional space: attachment anxiety and attachment avoidance, and could be measured using the Experiences in Close Relationships (ECR). Attachment anxiety corresponded to anxiety and vigilance concerning rejection and abandonment by others, and avoidance corresponded to discomfort with closeness and dependency or a reluctance to be intimate with others. Empirically, these dimensions map onto the model of self and other respectively, as in Bartholomew's (1990) model (see Figure 2) (Brennan *et al.*, 1998).

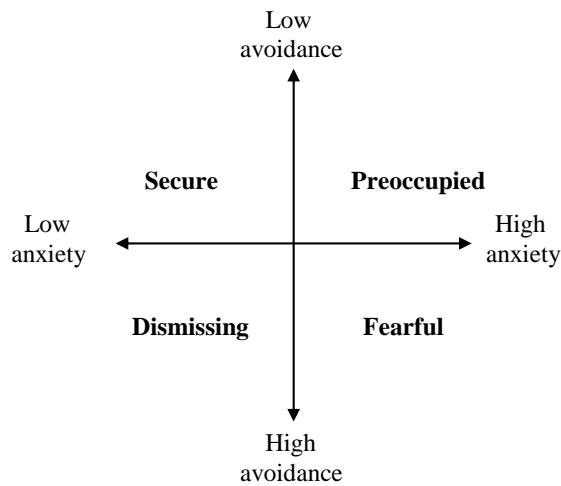


Figure 2. Two dimensions of anxiety and avoidance underlying self-report measures of attachment (Fraley & Shaver, 2000).

1.3.2 Attachment and its relationship to mental health

Bowlby (1977) suggested that the development of negative internal working models of self or others as a result of early attachment experiences can make individuals vulnerable to later psychopathology. He argued that from infancy individuals have several developmental pathways open to them. Using the analogy of railway lines, he argued personality development starts at a single main route which leaves a central point in a particular direction, but which forks into several different directions or pathways (Bowlby, 1973). He argued that the particular developmental pathway an individual takes depends on the interaction between internal factors such as temperament and the external environment. Bowlby (1973, 1980) argued that a disruption in attachment during the years of infancy, childhood and adolescence, such as separation, loss or threats of abandonment leads to the development of particular internal working models, which directs development onto a maladaptive pathway. The longer a maladaptive pathway is followed, the greater the possibility for developing

psychopathology later on in life (Sroufe *et al.*, 1999). Therefore a pattern of anxious attachment in infancy may initiate a process whereby a maladaptive pathway is taken, but this will only lead to later psychopathology if the external environment sustains and reinforces the continued development along that pathway, or in other words, the continued development of a negative model of self or others (Sroufe *et al.*, 1999).

1.3.2.1 Stability and continuity of internal working models

A central issue in attachment theory and research is the degree of stability and continuity of internal working models from childhood to adulthood. Bowlby (1977) argued that internal working models remain relatively stable across the life span. Thus the degree of attachment security an individual experiences in their adult relationships is likely to be a partial reflection of their attachment experiences in early childhood (Fraley, 2004). However, internal working models are also dynamic in that they can be updated as life circumstances change (Bowlby, 1973; Marrone, 1998). Such change, however, is likely to be difficult in adulthood when internal working models have become more firmly established and only occur when the lack of fit between reality and the model is extreme (Bolen, 2000).

Cassidy (2000) proposed a model of continuity from childhood to adulthood attachments (Figure 3). The model posits that representational models based on experiences with childhood attachment figures (path A), guides cognitive-affective processes (path B), which in turn guides behaviour (path C). This behaviour may guide the treatment received from others (path D), which, in turn, contributes and reinforces the original representational model (Cassidy, 2000). Longitudinal studies have shown between 51 and 77% correspondence between attachment classifications in childhood and classifications in adulthood (Waters *et al.*, 2000; Hamilton, 2000; Weinfield *et al.*, 2000).

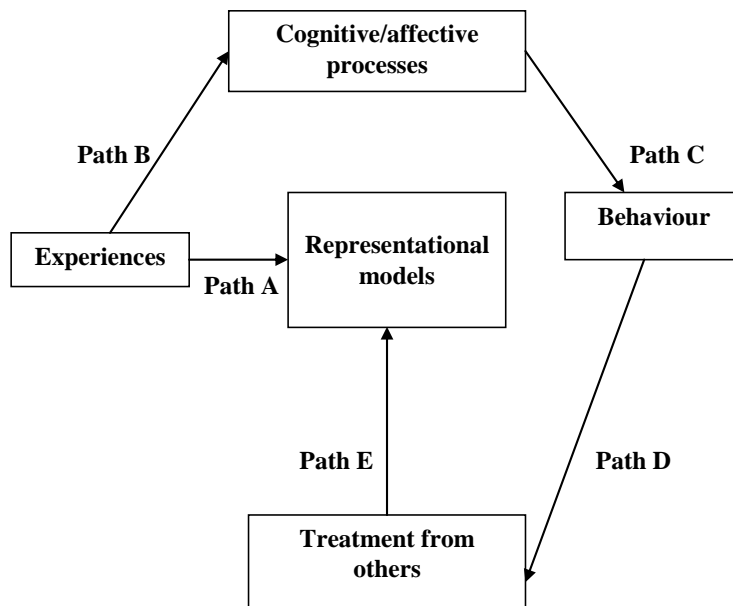


Figure 3. Model of attachment continuity (Cassidy, 2000)

1.3.2.2 Structure and organisation of internal working models

The quality of the early caregiving relationship not only influences the content of internal working models, but also their organisation and structure (Harter, 1999). For example, Bowlby (1973) suggested that emotional disturbance may be characterised by the existence of multiple, incompatible internal working models. Developing this notion, Crittenden (1990) proposed different types of internal working model meta-structure. One type is characterised by different relationships in an individual's life being organised into multiple, unrelated internal representations, with each being encoded into a different memory system. Although this type of organisational structure acknowledges the uniqueness of each relationship, it may also prevent the individual from developing a sense of coherency of the self across relationships

(Crittenden, 1990). For example, it was found marginally maltreated mothers had a variety of internal working models of different relationships but were unable to predict anything in general about relationships (Crittenden, 1990). Indeed, coherent organisation of internal working models is argued to play an important role in the creation of attachment security in adulthood (Main, 1991 cited in Collins and Read, 1990; Bretherton, 1993).

Reincke and Rogers (2001) argue that attachment theory can inform cognitive theories of psychopathology, as the assumption in attachment theory that negative working models of self and other develop from disturbances in early attachment relationships is entirely consistent with cognitive models that emphasise early experience leads to negative schemas of self, world and other, which in turn leads to dysfunctional beliefs and attitudes that cause psychological problems. It has been suggested that working models form the foundation for such schemas and beliefs (Gotlib & Hammen, 1992). In this way, attachment security is hypothesised to be associated with psychopathology through the mediating effect of cognition (Roberts *et al.*, 1996).

1.3.2.3 Attachment and self-concept

Beliefs about the self in relation to others, or internal working models of self, are central components of a person's self-concept (Collins & Read, 1994). Personality and development are argued to be inextricably related constructs (Lopez & Brennan, 2000). Thus it should follow that the quality of attachment experiences also influences the wider self-system. Indeed, Fonagy and Target (1997) argue that an ability to mentalise is an important determinant of self-organisation. Mentalisation evolves in the context of early attachment experiences, and involves the capacity to envision mental states in self and others, or theory of mind. This is important for the development of affect regulation and impulse control, abilities which are argued to be the 'building blocks of the organisation of the self' (Fonagy & Target, 1997, p.680).

There is some evidence to show that the structural aspects of the self-concept differ across adult secure-insecure attachment dimensions. In a series of studies, Mikulincer (1995) found that securely attached students exhibited self-concepts that were high in

complexity and were integrated, with low discrepancies between their own and others' self-perceptions. By contrast, anxious-ambivalent students' self-concepts showed low integration and less complexity as well as high discrepancies between own and other's perceptions of self. Those classified with an avoidant attachment style showed low integration and high discrepancies, but also showed high self-complexity. Mikulincer (1995) interpreted this finding as a reflection of the avoidant use of repression in which information that is not accepted as part of the self is dissociated from other positive self-aspects.

Lopez *et al.* (2002) found that attachment anxiety and avoidance were associated with less coherent and less authentic self-structures. Furthermore, measures of self-splitting and self-concealment mediated the relationship between attachment anxiety and distress. They concluded that this provides evidence that attachment anxiety influences affect regulation and information processing in ways that negatively impact on adaptive self-organisation (Lopez *et al.*, 2002). Similarly, Kim (2005) found that more secure attachment was associated with a greater degree of authentic self, which in turn, was associated with lower levels of self-concept fragmentation. Together these studies show that the way in which the self-concept is organised is influenced by a person's attachment style, and this in turn impacts on psychological functioning. However, the generalisability of the findings to clinical populations is limited, as all the studies used student samples.

1.3.2.4 Evidence for the link between adult attachment and psychopathology

Attachment style has been found to be associated with psychological distress and mental health problems. Research in this area can be broadly divided into studies that have used clinical and non-clinical samples, with most using self-report methods.

1.3.2.4.1 Research with non-clinical samples

Using the ECR (Brennan *et al.*, 1998), research has shown that attachment anxiety is associated with levels of depression and anxiety, and that attachment avoidance is related to depression in a student sample (Picardi *et al.*, 2005). Watt *et al.* (2005) found that students who reported a fearful or preoccupied attachment style scored

significantly higher on measures of anxiety sensitivity and anxiety than preoccupied or secure attachment styles. Muller *et al.* (2000) found that non-patients with a childhood history of abuse had higher self-reported levels of post traumatic stress symptoms if they were classified as having a fearful or preoccupied rather than dismissing attachment style. These results have been replicated in a sample of people at risk of experiencing critical incidents at their place of work (Declercq & Willemssen, 2006). Insecure attachment has also been shown to be associated with non-clinical psychotic phenomena such as paranoia and hallucinations (Berry *et al.*, 2006).

1.3.2.4.2 Research with clinical samples

Research with clinical samples has yielded similar results. In the first controlled study, Fonagy *et al.* (1996) used the Adult Attachment Interview (AAI; George *et al.*, 1985, cited in Fonagy *et al.*, 1996), which assesses attachment based on the discussion of childhood relationships with their parents, to compare the attachment pattern of psychiatric inpatients and individuals in a matched control group. They found that the psychiatric group differed significantly from the control group on mean AAI scales. Specifically, the psychiatric group reported less positive experiences (that is, the experience of loving relationships with parents), greater experience of rejecting, neglectful parents and lower coherence of mind. Mason *et al.* (2005) investigated attachment styles and maladaptive schemas in a clinical sample. With 81% of their sample classified as having an insecure attachment style, they found that the fearful group exhibited the greatest degree of maladaptive schemas, followed by the preoccupied group.

1.3.2.4.3 Possible mediating variables

Research in this area is increasingly investigating variables that may mediate the relationship between attachment and psychopathology. Research has found significant mediators to include intimacy in current romantic relationships (Pielage *et al.*, 2005), problem coping styles (Lopez *et al.*, 2001), self-splitting and self-concealment (Lopez *et al.*, 2002) and affect regulation (Wei *et al.*, 2005). Possible cognitive variables have also been investigated. Roberts *et al.* (1996) found that dysfunctional attitudes

partially mediated the relationship between attachment insecurity and depressive symptoms. The authors concluded that their data supported the view that adult attachment styles ‘appear to exert little or no direct influence on depression and instead operate indirectly through negative thinking about the self’ (p.316). These findings have been replicated in student (Hankin *et al.*, 2005) and clinically depressed samples (Reinecke & Rogers, 2001). Similarly, Williams and Riskind (2004) explored the way in which individuals interpreted past or future events in a sample of 291 students. Using the ECR, they found that students with higher levels of attachment insecurity reported higher levels of psychological symptoms. Importantly, they found that the relationship between both attachment anxiety and attachment avoidance and symptoms of anxiety was partially mediated by the degree in which individuals appraised threat as rapidly increasing in risk. Similarly, the relationship between attachment avoidance and anxiety symptoms was partially mediated by the degree of pessimistic explanatory style.

1.4 Vulnerability to OCD: Theoretical approaches

1.4.1 Guidano and Liotti’s (1983) model of OCD

Guidano and Liotti (1983) propose a model of OCD that draws on attachment and cognitive theories to emphasise the structural elements of the self in producing symptoms. Guidano and Liotti (1983) view early attachment relationships as the ‘medium’ through which an infant’s developing self-knowledge is constructed. They describe that parents act as a ‘mirror’ and through their interactions provides information that allows children to ‘recognise attributes that define them as individuals to others and consequently to themselves’ (Guidano & Liotti, 1983, p.103). Similar to Bowlby’s (1973) internal working models concept, they argue that cognitive structures are hierarchically organised, and that early interactions with caregivers form a ‘nucleus’ of tacit self-knowledge (Guidano & Liotti, 1983, p.104).

Guidano (1987) argues that individuals with OCD have experienced an early home environment in which the parents have emphasised strong moral and ethical values as well as demanding excessive maturity and a sense of responsibility in the child. Alongside this, individuals who develop OCD may have experienced a particular kind

of attachment environment that produces two distinctly opposite, and equally plausible, interpretations of self and reality (Guidano & Liotti, 1983, 1985). For example, a situation in which 'a parent is attentive, thoughtful, and totally dedicated to the child's moral and social education, without expressing his or her love with a caress or other affective display' (Guidano & Liotti, 1983, p.112). If prolonged, this experience has the effect of producing a split in the emerging self-identity. This split is characterised by an attitude towards reality and the self that simultaneously has opposite valences, termed self-ambivalence. Thus in order to have a reliable and coherent sense of self, Guidano (1987) argues that an obsessive-prone individual is forced to choose between two polarities. Either she is lovable and acceptable or neither is true. In this way, a constant effort for perfection and control emerges in an attempt to maintain that '*only one* of the two opposites is 'true', or must at least become true...' (Guidano & Liotti, 1983, p.202).

Guidano and Liotti (1983) emphasise that self-knowledge is the central aspect of cognitive organisation, which leads to other cognitive structures such as beliefs and assumptions. Thus self-ambivalence is viewed as a higher-order construct which provides the motivation for beliefs about being perfect, and/or moral. Similar to the beliefs defined by the OCCWG (1997), examples include 'the idea that there invariably is a right, precise and perfect solution to human problems' and the belief that 'one should be thoroughly competent, adequate and achieving in all possible aspects if one is to consider oneself worthwhile' (Guidano & Liotti, 1983 p.203). According to Guidano and Liotti (1983), such beliefs serve to protect the individual against loss of self-esteem and further self-concept confusion and guide behaviour in such a way that leads to the accomplishment of perfection and control. In this way, self-ambivalence in OCD is theorised not to lead directly to OC symptoms, but enables the development of certain maladaptive beliefs, which in turn leads to symptoms.

1.4.2 Clark's (2004) cognitive control theory of obsessions

In a new addition to the field, Clark (2004) proposes that vulnerability to the development and maintenance of obsessions occurs at three different conceptual

levels; at a vulnerability level, a primary appraisal level and a secondary appraisal level (see Figure 3). Clark (2004) argues for the presence of three personality factors that place individuals at risk of misinterpreting unwanted mental intrusions as threatening. The first is 'negative affectivity' which constitutes a personality disposition that increases susceptibility to experience worry, anxiety and depression. The second factor involves pre-existing metacognitive beliefs concerning the importance of intrusive thoughts and their control. Third, Clark (2004) places an ambivalent and uncertain self-concept as a central vulnerability factor for OCD. Specifically, Clark (2004; Purdon & Clark, 1999) argues that an uncertain, ambivalent self-concept may lead to a propensity to misinterpret unwanted intrusive thoughts as a 'threat to core personal values and ideals' (Clark, 2004, p.139). This is in line with Rachman (1998) who noted that intrusive thoughts that are most likely to be misinterpreted as significant and threatening are those which are contrary to or threaten the person's system of values.

A central feature of obsessions that distinguishes them from other anxious thoughts is their ego-dystonic nature (Purdon & Clark, 1999). Indeed, research has shown that people with OCD often evaluate their most upsetting obsessions as more meaningful and contradicting valued aspects of the self to a greater degree than less upsetting ones (Rowa *et al.*, 2005). Clark (2004) argues that the ego-dystonic nature of intrusions *and* a pre-existing uncertain and fragile self view leads to a primary appraisal of the unwanted intrusion as threatening. For example, if an individual's sense of self is characterised by doubt and uncertainty it is more likely that they would interpret an intrusion about harming a child as highly significant. This could be because the intrusion introduces the possibility that the individual *is* capable of committing such an act (because of beliefs about the importance of thoughts), which may also be contrary to the individual's view of themselves as a person that does not harm children. A person who experiences the same thought and has both a stable sense of themselves as not being the kind of person capable of harming children, and does not hold beliefs about the importance of thoughts, is most likely to discount the meaning of the thought and appraise it as benign (Purdon & Clark, 1999; Clark, 2004).

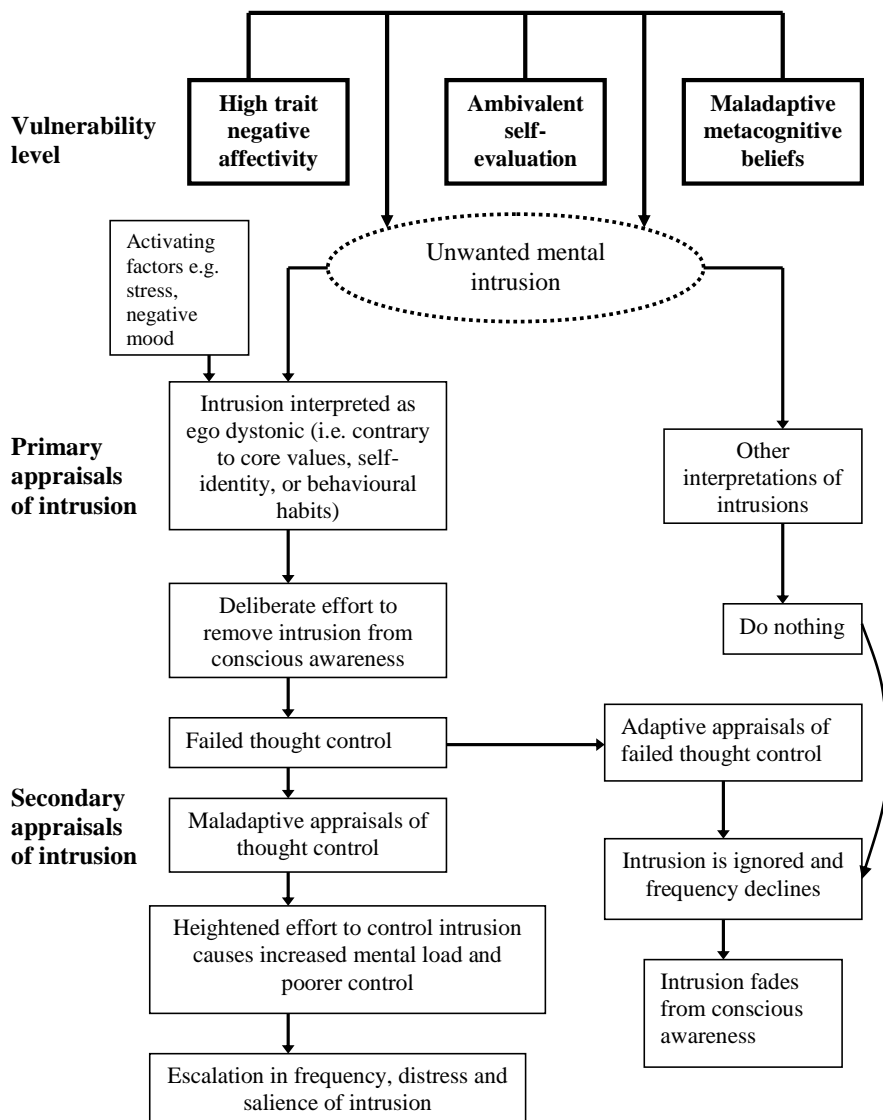


Figure 4. Clark's (2004) cognitive control theory of obsessions

However, if the intrusion is misinterpreted as significant, Clark (2004) argues that this leads to deliberate efforts to control the thought either by dismissing it or removing it from conscious awareness. However, this leads to a failure to control the thoughts. A secondary appraisal process then occurs in which the individual evaluates the outcome of their control efforts, which can be adaptive or maladaptive. Clark (2004) proposes that implicit in the maladaptive appraisals of failed thought control are beliefs that it is possible and desirable to achieve complete control over unwanted intrusive thoughts.

Finally, Clark (2004) argues that in OCD failed thought control leads to even greater efforts to control unwanted thoughts, particularly as failure in thought control is typically misinterpreted as indicating a sign or test, for example 'if I can't control unwanted sexual intrusions, then I might lose control over my sexual behaviour (p.145). Together, these cognitive processes lead to greater attention to try to control the obsession, which Clark (2004) proposes results in greater cognitive load and subsequent poorer perceived control over the obsession, which ensures an increasing escalation in the frequency and distress associated with the obsession. Direct empirical evidence for the cognitive control theory of obsessions is limited (Clark, 2004). However, some research shows indirect support for some aspects of the model. For example, metacognitive beliefs about the importance of controlling thoughts are endorsed more by people with OCD than anxious controls and are strongly associated with OC symptoms (OCCWG, 2001, 2003, 2005).

1.4.3 Evidence for the role of attachment and self-concept in the pathogenesis of OCD

1.4.3.1 Attachment and OCD

Research investigating attachment in OCD is extremely limited, and has typically focused on gaining an overall picture of the early attachment relationship by measuring recalled parental style, rather than directly measuring the degree of attachment security or style. Research using sub-clinical samples has yielded consistent results. For example, studies using students and adolescents found that they

rated their parental upbringing as more rejecting, overprotective and less emotionally warm compared with controls (Ehiobuche, 1988; Klimidis *et al.* 1992). Aycicegi *et al.* (2002) found that a psychologically manipulative and controlling parental style was associated with OCD symptoms and OC personality traits in a non-clinical student sample.

However, studies using clinical samples have typically yielded more mixed results. Compared with a control group, high levels of parental overprotection were reported by members of OCD self-help groups (Hafner, 1988). Using the Parenting Bonding Index (PBI; Parker *et al.*, 1979), a self-report measure that assesses an individual's perception of his or her parents' rearing practices up until the age of 16, Chambless *et al.* (1996) compared individuals with a diagnosis of OCD to those with a diagnosis of agoraphobia. There was no significant difference between the two groups on the PBI, although PBI scores were associated with global measures of distress, anxious personality characteristics and poor social adjustment. The authors suggested that the results showed that poor parental bonding constitutes a general risk factor for the development of anxiety disorders. In support of this, Mancini *et al.* (2000) found no significant correlation between OC symptoms in a sub-clinical sample and the parenting styles as measured by the PBI. Similar to Chambless *et al.* (1996), they found that low parental care was a better predictor of trait anxiety and depression than obsessivity.

Vogel *et al.* (1997) found that individuals with depression reported significantly lower levels of parental care and higher levels of maternal overprotection than non-psychiatric controls, whereas there was no difference between individuals diagnosed with OCD and controls. However, a weakness of this study was the limited number of individuals with OCD compared with those diagnosed with depression. Similarly, Turgeon *et al.* (2002) compared an OCD group with other anxiety disorders such as panic disorder with agoraphobia. No differences were found on recalled parental style, although both groups recalled their parents as more protective compared to controls. However, other studies have found a difference in parenting practices in OCD. For example, Alonso *et al.* (2004) compared OCD patients with non-psychiatric controls

and found that the OCD group perceived their fathers as more rejecting than controls. No differences were found regarding parental overprotection, although OCD patients with hoarding symptoms perceived their parents as being less emotionally warm than controls.

Only one study has investigated the link between attachment and OCD directly. Myhr *et al.* (2004) measured recalled parental style and romantic attachment style in 36 OCD patients, 16 patients diagnosed with depression or dysthymia and 26 healthy controls using a self-report measure. Controlling for depression, they found that the OCD and depressed groups exhibited higher attachment insecurity than the control group. Specifically, the OCD group and depressed group demonstrated more relationship anxiety than the control group, but did not differ from each other. In addition, the depressed group and unmarried OCD participants reported more discomfort with dependence than the control group. Interestingly, attachment insecurity in the OCD group was not associated with less caring or more controlling parenting styles compared with the control group. A limitation of this study was the small numbers in the depressed group.

1.4.3.2 Self-concept and OCD

It is important to note that Guidano and Liotti (1983) based their model on clinical observations of OCD, not empirical evidence. Similarly, Clark (2004) notes that the research on whether an uncertain/ambivalent self-concept is relevant to OCD is very limited. Doron and Kyrios (2005) highlight the structural aspect of the self-concept in producing vulnerability to OCD. They propose that individuals vulnerable to OCD hold a self-structure that comprises few domains. It is argued these domains are 'sensitive' due to large discrepancies between perceived competence and the importance attributed to those domains. Thus the individual becomes vulnerable to stimuli that threatens their feelings of competence in these domains. This combined with beliefs concerning the world as dangerous but controllable predisposes the individual to experience extreme anxiety when an intrusion they experience relating to failure in 'sensitive' domains of self. Consistent with this, Doron *et al.* (2006) found

that sensitivity in self-domains was related to higher levels of OC-related beliefs and higher levels of OC symptoms in a student sample.

Only one study has directly tested whether Guidano and Liotti's (1983) concept of self-ambivalence is relevant to OCD in a clinical sample. Bhar (2004) developed a measure of self-ambivalence and found that compared with non-psychiatric controls, individuals diagnosed with OCD scored significantly higher on self-ambivalence, after controlling for self-esteem and mood variables. However, this difference was not observed between the OCD group and an anxious control group. A strong relationship was also found between self-ambivalence and depression. Furthermore, self-ambivalence was associated with OC-related belief domains, measured in this study by the short version of the OBQ, the OBQ-44 (OCCWG, 2003). In support of Guidano and Liotti's (1983) theory, a regression analysis found that the relationship between the self-ambivalence and OC symptoms was mediated by the OBQ-44 subscales, although no individual subscale completely explained this relationship. As self-concept certainty is also found to be important in social phobia (Wilson & Rapee, 2006), these results suggest that it is the particular kinds of beliefs that an individual develops that determines whether an individual experiences social phobia or OCD. Thus an uncertain and ambivalent self-concept may represent a general predisposing factor rather than a specific vulnerability for OCD (Bhar, 2004).

1.5 The current study

The current study aims to draw together self-concept theory, attachment theory and cognitive theories of OCD to contribute to the understanding of vulnerability to OCD.

1.5.1 Justification for the study

Conducting a study that investigates attachment and self-concept clarity in OCD is important for two reasons. First, research shows that attachment insecurity is associated with various forms of psychopathology (Platts *et al.*, 2002). However, only one study has investigated attachment in OCD, which suggests that a further study would be helpful (Myhr *et al.*, 2004). Second, organisation of the self-concept has been shown to be linked with the degree of attachment security. Specifically, greater

integration or unity in the structure of the self-concept is associated with higher levels of attachment security, which in turn is associated with better psychological functioning (Lopez *et al.*, 2002; Kim, 2005). Self-concept clarity is one type of self-concept structure that emphasises integration, however no research has explored the relationship between self-concept clarity and attachment in OCD. Therefore, the current study will investigate whether a greater degree of attachment insecurity will be associated with less self-concept clarity.

One study has found self-concept clarity to be important in social phobia (Wilson & Rapee, 2006), suggesting that this may be a feature of other anxiety disorders. Indeed, vulnerability to OCD is theorised to take the form of a dichotomous and confusing attachment experience early in life, resulting in an ambivalent and uncertain self-concept (Guidano & Liotti, 1983; 1985; Guidano, 1987). One study has explored the role of self-ambivalence in OCD (Bhar, 2004). However, no research exists that investigates self-concept clarity in OCD, a broader construct than ambivalence. Therefore the current study will investigate whether individuals who report OC symptoms have self-concepts that are characterised by a lack of clarity, compared with a group of individuals who do not report mental health problems.

An ambivalent and uncertain self-concept is theorised to lead to misinterpretations of intrusive thoughts, which, combined with dysfunctional beliefs about the importance of controlling thoughts, is argued to lead to the development of OC symptoms (Clark, 2004). However, there is currently very limited research that tests these theoretical assumptions. Therefore the study will investigate whether people who report OC symptoms exhibit higher levels of OC-related beliefs, and whether these beliefs are associated with higher levels of self-concept uncertainty.

Cognitive vulnerabilities such as dysfunctional beliefs have been shown to mediate the relationship between attachment and psychopathology (Roberts *et al.*, 1996). Indeed, Guidano and Liotti (1983) propose that such dysfunctional beliefs mediate the relationship between insecure attachment and OCD. However, no research has investigated possible mediators of this relationship in OCD. Therefore the current

study will explore whether dysfunctional OC-related beliefs mediate the relationship between attachment security and OC symptoms. Furthermore, based on previous research (Bhar, 2004), it would be expected that dysfunctional OC-related beliefs will also mediate the relationship between self-concept clarity and OC symptoms.

1.5.2 Hypotheses

The following hypotheses can be formulated on the basis of the theories and previous research discussed above:

- 1) Individuals who report OC symptoms will have higher levels of OC-related beliefs* compared with individuals who do not report mental health difficulties.
- 2) Individuals who report OC symptoms will have a greater degree of attachment insecurity in comparison to individuals who do not report mental health difficulties.
- 3) Individuals who report OC symptoms will exhibit less self-concept clarity in comparison to individuals who do not report mental health difficulties.
- 4) A greater degree of attachment insecurity will be associated with less self-concept clarity in individuals who report OC symptoms and in individuals who do not report mental health difficulties.
- 5) A greater degree of OC-related beliefs and symptoms will be associated with less self-concept clarity in individuals who report OC symptoms and also in individuals who do not report mental health difficulties.
- 6) OC-related beliefs will mediate the relationship between attachment security and degree of OC symptoms in individuals who report OC symptoms.

* Beliefs relating to responsibility/threat estimation, perfectionism/certainty and importance/control of thoughts

- 7) OC-related beliefs will mediate the relationship between self-concept clarity and degree of OC symptoms in individuals who report OC symptoms.

2. METHOD

2.1 Design

The study has adopted a cross-sectional, between groups design. This type of design was chosen to allow for the comparison of individuals who reported experiencing OC symptoms and individuals who reported no mental health difficulties. The independent variable was OC symptoms. The dependent variables were attachment security, self-concept clarity, and OC-related beliefs.

2.2 Participants

The OCD group was recruited through psychological services and community mental health teams within three National Health Service (NHS) Trusts within South-East England and through charitable organisations within the voluntary sector throughout England. The comparison group was recruited through community organisations within South East England.

2.2.1 Sample size

To ensure adequate statistical power to detect any significant differences between the groups, a power analysis was carried out. A medium effect size was selected ($d = .50$). The power tables developed by Cohen (1992) indicated that 64 participants in each group were needed in order to detect a medium effect size with a significance level of .05, and a power value of at least .80, using t tests. Marczyk *et al.* (2005) recommends calculating the statistical power of each planned analyses. Correlational analyses were planned, thus 85 participants were needed in each group to detect a medium effect with a power value of .80 (Cohen, 1992). Multiple regression was also planned, thus 84 participants were needed to detect a medium effect with a power value of .80 (Cohen, 1992). It was anticipated that limited resources and time pressures may result in

difficulties recruiting 85 participants to each group, thus calculations were also made for detecting a large effect size ($d = .80$). To detect a large effect size 26, 28 and 38 participants were needed in each group for t tests, correlation and multiple regression analyses respectively. Therefore, it was determined that each group should contain at least 26 participants, with the aim of achieving a total of 85 participants in each group.

2.2.2 Inclusion/exclusion criteria

2.2.2.1 OCD group

To be included in the study, participants were required to be between 18 and 65 years of age inclusive. It was originally intended that the entire OCD group would be recruited from the NHS. However, discussions with NHS clinicians revealed that some difficulty would have been encountered in obtaining appropriate numbers of participants. It was therefore decided that recruitment would also take place within charitable organisations. Recruitment of the non-NHS group commenced first as ethical approval for this type of recruitment was gained prior to ethical approval for NHS recruitment.

All participants in the OCD group were included if they scored within the clinical range on the total score of the Obsessive Compulsive Inventory–Revised (OCI-R; Foa *et al.*, 2002). Participants who were recruited through the NHS were included if they had a principal diagnosis of OCD from a psychiatrist. NHS-recruited participants were excluded if they were deemed by their mental health professional to have a diagnosis of learning disability, psychosis or experience current substance misuse. Three participants recruited from non-NHS organisations were excluded as their scores on the OCI-R were below the cut off score.

2.2.2.2 Comparison group

Comparison group participants were included if they were 18 to 65 years of age inclusive. Individuals were included if they reported that they had not previously experienced or ever been treated for a mental health problem. Individuals were excluded if they were within the clinical range of the Symptom Checklist–90-Revised (SCL-90-R; Derogatis, 1994). Individuals who scored within the clinical range of the

total score of the OCI-R or who scored within the moderate or severe range of the Beck Depression Inventory-Second Edition (BDI-II; Beck *et al.*, 1996) were excluded. In total 14 participants were excluded from the study; seven due to scores being within the clinical range on the SCL-90-R, two due to scores being within the clinical range on the OCI-R, one due to a moderate BDI-II score, three participants reported previous mental health problems, and one participant was above the age cut off.

2.3 Measures

2.3.1 *The Self Concept Clarity Scale (SCCS; Appendix 2)*

The SCCS (Campbell *et al.*, 1996) is a 12 item self-report measure that was chosen as it allowed the assessment of self-concept clarity, a structural aspect of the self-concept. Specifically, the SCCS measures the extent to which self-beliefs are clearly and confidently defined, internally consistent and stable. Respondents are required to rate their degree of agreement with twelve statements. Examples of items include 'my beliefs about myself often conflict with one another' and 'sometimes I think I know other people better than I know myself'. Ratings are given on a five point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Items are summed, following appropriate reversals as indicated by Campbell *et al.* (1996), to form a total score reflecting degree of clarity. The total score ranges from 12 (low clarity) to 60 (high clarity).

Campbell *et al.* (1996) reported good internal consistency for the scale, yielding an alpha coefficient of .86. Similarly, high levels of test re-test reliability were reported across two samples with four and five month intervals (correlations of .79 and .70 respectively). In terms of the scale's validity, a correlation of .61 was found with measures of self-esteem, providing evidence of construct validity. A factor analysis found strong evidence of a single, general factor, as expected. SCCS scores were found to reliably predict the temporal stability and internal consistency of participants' self-descriptions, demonstrating the scale's criterion validity. The internal consistency of the SCCS was tested in the current study using Cronbach's alpha. The alpha value was found to be .92, showing a good level of internal consistency.

2.3.2 The Experiences in Close Relationships – Revised (ECR-R; Appendix 3)

The ECR-R (Fraley *et al.*, 2000) is a self-report questionnaire that measures adult romantic attachment. The ECR-R is a revised version of the original measure, the ECR (Brennan *et al.*, 1998). The items of the ECR-R were taken from the same item pool as those from the ECR, using item response theory analysis (Fraley *et al.*, 2000). The ECR-R was chosen for this study because it is based on a reanalysis of a 323 item dataset of all other self-report attachment measures, and is thus argued to provide the most appropriate measure of adult romantic attachment (Sibley *et al.*, 2005)

The ECR-R contains 36 items, with two 18-item subscales corresponding to attachment related anxiety and avoidance. Respondents are required to indicate how they generally experience relationships, and to rate the degree to which they agree or disagree with the item statements. Examples of items include ‘I’m afraid I will lose my partner’s love’, for the anxiety subscale, and ‘I prefer not to be too close to romantic partners’ for the avoidance subscale. Ratings are given on a seven point Likert scale ranging from ‘disagree strongly’ to ‘agree strongly’. The scores for each subscale are averaged to provide an attachment related anxiety and avoidance score.

Sibley and Liu (2004) examined the ECR-R’s internal reliability, factor structure and short-term temporal stability. A principal components exploratory factor analysis found that the anxiety and avoidance subscales of the ECR-R comprised distinctive dimensions with high internal reliabilities ($\alpha = 0.95$; $\alpha = 0.93$, respectively). The anxiety and avoidance subscales were found to be stable over a six-week period. In a further study, Sibley *et al.* (2005) found that the ECR-R accurately fitted the hypothesised two-factor solution representing anxiety and avoidance. Fairchild and Finney (2006) also found evidence to generally support a two-factor model and reported good internal consistency with both scales yielding alpha coefficients of above .90. Cronbach’s alpha for the current study was comparable to those found in previous studies ($\alpha = .95$ for the avoidance subscale and $\alpha = .97$ for the anxiety subscale).

2.3.3 The Obsessive Compulsive Inventory – Revised (OCI-R; Appendix 4)

The OCI-R (Foa *et al.*, 2002) is a self-report inventory that is designed to measure the symptoms of OCD according to DSM-IV (APA, 1994). The OCI-R is a revised version of the 42-item Obsessive Compulsive Inventory (Foa *et al.*, 1998). The OCI-R was chosen for this study as it is a diagnostic screening tool, and therefore allowed for the identification of participants with OCD using empirically derived cut off scores, and can be used with clinical and non-clinical populations. It has the advantage of being a brief measure with only 18 items. The OCI-R requires respondents to rate how much each item has distressed or bothered them in the last month. Items consist of statements regarding various symptoms, for example, 'I collect things I don't need'. Ratings are given on a five-point Likert scale ranging from 'not at all' to 'extremely'. The scores for individual items are summed to provide a total score and scores on six subscales corresponding to washing, checking, ordering, hoarding, neutralising and obsessing symptom categories. A total score of 21 or above indicates clinically significant symptoms (Foa *et al.*, 2002).

Using a sample of 118 patients with OCD, 146 patients with other anxiety disorders and 74 non-anxious individuals, Foa *et al.* (2002) investigated the reliability and validity of the OCI-R. They reported good internal consistency for the total score across samples, with alpha coefficients of .81 for the OCD group, .93 for social phobia .91 for PTSD group and .89 for the controls. Test-retest reliability was found to be good, with significant correlations for the total and subscale scores within the OCD group (correlations ranging from .74 to .91) and the control group (ranging from .57 to .87). Convergent validity was demonstrated through significant positive correlations with other OCD measures for the total score. However, high correlations were found between the OCI-R and measures of depression, indicating weaker discriminant validity. The authors concluded this finding perhaps reflected high levels of depression observed in many people with OCD (Foa *et al.*, 2002). A further study using a non-clinical sample found evidence for high internal consistency, adequate test re-test reliability and excellent convergent validity (Hajcak *et al.*, 2004).

A limitation of the Foa *et al.* (2002) study is that the results may have been due to order or context effects as the data were not collected by administering the OCI-R. Instead, the 18 items were extracted from responses to the earlier, 42 item measure. To address this, Abramowitz and Deacon (2006) administered the OCI-R to 322 patients with an anxiety disorder, 167 of which were diagnosed with OCD. They found evidence for good convergent and discriminant validity of the measure but weak divergent validity, as mild to moderate correlations were observed between four of the subscales and measures of depression and trait anxiety. Finally, a recent study investigated the OCI-R's discriminant validity by comparing scores between an OCD group and a group of people diagnosed with generalised anxiety disorder. They found that individuals diagnosed with GAD had substantially lower OCI-R total and subscale scores than the total OCD sample (Huppert *et al.*, 2007). The internal consistency of the OCI-R was assessed in the current study. Cronbach's alpha values were .95 for the total score, .89 for the washing subscale, .83 for the hoarding subscale, .95 for the ordering subscale, .94 for the checking subscale, .91 for the neutralising subscale and .94 for the obsessing subscale.

2.3.4 The Obsessive Beliefs Questionnaire – Short Version (OBQ-44; Appendix 5)

The OBQ-44 is a self-report measure that assesses enduring, predisposing beliefs that may increase risk for OCD (OCCWG, 2003). The OBQ-44 is a shortened version of the 87-item version of the OBQ (OCCWG, 2001). The OBQ-44 was chosen for this study as it allows measurement of all the belief domains thought to be important in OCD. The OCCWG (1997) defined these beliefs domains below:

Overestimation of threat – beliefs reflecting an exaggeration of the probability or severity of harm.

Inflated responsibility - the belief that one has the power to bring about or prevent subjectively crucial negative outcomes.

Perfectionism - the belief that there is a perfect solution to every problem, and that doing something perfectly/mistake free is not only possible, but also necessary, and that even minor mistakes will have serious consequences.

Intolerance of uncertainty - the belief that one has a poor capacity to cope with unpredictable change, that it is difficult to function adequately in ambiguous situations and that it is necessary to be certain.

Importance of controlling one's thoughts - defined as the overvaluation of the importance of exerting complete control over intrusive thoughts, images, and impulses, and the belief that this is both possible and desirable.

Over-importance of thoughts - the belief that the mere presence of a thought indicates it is important.

The OBQ-44 requires respondents to rate their general level of agreement with each item. Items consist of statements that reflect the different belief domains. Ratings are given on a seven-point Likert scale ranging from 'disagree very much' to 'agree very much'. Ratings are summed to give scores for each belief domain, or subscale, and a total score. A factor analysis of the 87-item version of the OBQ identified three factors, and the scale was shortened to 44 items based on item loadings across clinical and non-clinical groups (OCCWG, 2005). The OBQ-44 thus comprises three subscales. Sixteen items within the inflated responsibility and overestimation of threat (RT) subscale, 12 items comprising the importance and control of thoughts (ICT) subscale and 16 items comprising the perfectionism and intolerance of uncertainty subscale (PC).

The OBQ-44 has been shown to have good internal consistency, with high Cronbach alpha coefficients, ranging from .89 to .95 for the subscales and the total score (OCCWG, 2005). In the same study, the OBQ-44 was found to reliably distinguish OC patients from non-clinical controls, however the difference in scores was not significant for the PC subscale. Finally, there is evidence of good convergent validity,

as the total score correlated significantly with measures of OC symptoms within the OCD group, and some evidence of discriminant validity evidenced by a regression analyses revealing the OBQ-44 generally predicted OC symptoms in patterns that would be expected clinically (OCCWG, 2005). The OBQ-44 showed a good level of internal consistency in the current study, with Cronbach alpha's of .98 for the total score, .97 for the RT subscale, .94 for the ICT subscale and .96 for the PC subscale.

2.3.5 The Beck Depression Inventory – Second Edition (BDI-II; Appendix 6)

The BDI-II (Beck *et al.*, 1996) is a self-report measure that assesses current levels of mood and various thoughts and behaviours associated with depression. The BDI-II was chosen to allow for a relatively quick and reliable assessment of depressive symptoms. The BDI-II contains 21 items and respondents are required to indicate their response using a four point scale ranging from zero to three. Scores for each item are summed to give an overall score for depression. A higher score indicates the presence of higher levels of depressive symptomatology.

Beck *et al.* (1996) found the BDI-II to have high internal consistency, with alpha coefficients of .93 for students and .92 for outpatients. The BDI-II was found to have good criterion validity, discriminating people with a diagnosis of depression, patients with other diagnoses and a non-clinical group, and good convergent validity (Beck *et al.*, 1996). Comparable results were shown in a college student sample (Osman *et al.*, 1997).

2.3.6 The Symptom Checklist-90-Revised (SCL-90-R; Appendix 7)

The SCL-90-R (Derogatis, 1994) is a self-report questionnaire designed to assess various psychological symptom patterns. The SCL-90-R was chosen as it allows the assessment of an individual's clinical status, in terms of whether their scores reflect 'caseness', or psychiatric disorder. Respondents are required to rate how much each item has distressed or bothered them in the last week. Ratings are given on a five point Likert scale ranging from 'not at all' to 'extremely'. Scores for individual items represent nine primary symptom dimensions. These are: somatisation, obsessive-

compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychotism. In addition, three global indices can be obtained from the scores and reflect the overall level of symptomatology and psychological distress. The global indices are the global severity index (GSI), positive symptom distress index (PSDI) and positive symptom total (PST). Respondents are considered to be within the clinical range if they receive a GSI score greater than or equal to 63, or if any two primary dimension scores are greater than or equal to a T score of 63 (Derogatis, 1994).

The SCL-90-R demonstrates good internal consistency, with alpha coefficients between .82 and .90 across the nine symptoms dimensions and coefficients of between .68 and .90 for test re-test reliability during a two week period (Derogatis, 1994). In addition, the SCL-90-R also demonstrates good convergent and discriminant validity (for a review see Derogatis, 1994).

2.3.7 Demographic questionnaire (Appendix 8)

Information regarding participants' age, sex, ethnic group, marital status, qualifications, employment status and socio-economic status was collected. Questions regarding socio-economic status were derived from the National Statistics Socio-economic Classification (Office for National Statistics; ONS, 2002). Questions about each respondent's qualifications, ethnic group and marital status were based on the Office for National Statistics' census questions (ONS, 2001). For OCD group participants, within the demographic section of the questionnaire further information was obtained regarding whether participants were receiving treatment for their symptoms, type of treatment, and whether there was a familial history of OCD.

2.3.8 Screening questionnaire (Appendix 9)

The use of an interview schedule such as the Structured Clinical Interview for Axis I DSM-IV Disorders (First *et al.*, 1994) was considered for this study to allow the identification of psychiatric disorders, including OCD. However, typically interview schedules of this kind take 90 minutes or more to administer. As at least 52 participants were needed, this was not considered to be feasible given the time and

resource limitations of the study. Given that participants were to be recruited from outside the NHS, and thus a diagnosis of OCD could not be reliably determined, the DSM-IV (APA, 1994) criteria were used to form a screening measure, as an adjunct to the clinical cut off score on the OCI-R.

2.4 Procedure

2.4.1 Recruitment

2.4.1.1 NHS OCD group recruitment

Participants with a diagnosis of OCD were recruited through psychology services and community mental health teams across three large NHS Trusts within the South-East. Initially clinical psychologists, consultant psychiatrists and team managers were approached to explore whether it would be possible to present the research and need for participants at a team meeting. The research was then presented at community team meetings and at psychology department meetings. The presentation outlined the rationale of the study and what was required of clinicians, if they agreed to support the research. Each clinician was given an information sheet that described the rationale and procedure of the research and a list of the exclusion and inclusion criteria (Appendix 10).

Clinicians were asked to identify suitable individuals on their current and most recent caseloads. Once identified, clinicians were asked to introduce the study to potential participants and give an information sheet to interested individuals (Appendix 11). To minimise imposition on clinicians, they were given information packs that included a stamped addressed envelope, contact details sheet (Appendix 12) and consent form (Appendix 13) to give to potential participants. Interested individuals could then return their contact details and consent form to the chief investigator. Alternatively, in agreement with the individual, clinicians could pass the person's contact details onto the chief investigator. In all cases participants were given an information sheet for at least twenty-four hours, to consider whether or not they wanted to take part and a choice of completing the questionnaire alone at home, or with the support of the chief investigator.

2.4.1.2 Non-NHS OCD group recruitment

Recruitment of the non-NHS OCD group took place through OCD and anxiety-related charitable organisations. It was felt that this form of recruitment should take place in addition to recruiting through the NHS to ensure that adequate numbers of participants were reached. Through these organisations, community support groups were identified and approached. For groups that operated outside South East England, information packs were sent to group organisers to distribute to interested individuals. For support groups operating within South East England, the chief investigator presented the research at support group meetings (5 in total). At these meetings the purpose and format of the research was presented, and information packs given to interested individuals. In addition, adverts were placed on the organisations' websites which asked interested individuals to contact the chief investigator directly (Appendix 14).

2.4.1.3 Comparison group recruitment

The comparison group were recruited by advertising within community organisations such as libraries and community centres (Appendix 15). Community groups such as reading and sports groups were approached. Some groups declined to allow recruitment for the study, others were agreeable to the chief investigator briefly presenting the study at group meetings. Interested participants were invited to take a questionnaire pack, which included the questionnaire, participant information sheet and consent form. In addition, the study was advertised on various community websites in which interested participants were invited to contact the chief investigator. All participants in the comparison group completed the questionnaire unaided and posted it back to the chief investigator in a stamped addressed envelope.

2.4.2 Contact with the chief investigator

If the details of potential participants had been passed onto the chief investigator, the chief investigator then contacted the individual by sending out an information pack. If a potential participant had sent their contact details through the post, and had indicated that they wanted the questionnaire sent to them, the questionnaire was sent. If they indicated they would like to meet with the chief investigator, the chief investigator then contacted the person and made arrangements to meet with them. On meeting

potential participants, the study was further explained and any questions were answered. It was highlighted that the research was entirely voluntary and that participants could withdraw at any time without giving a reason. The level of support required in completing the questionnaire was chosen by the participant. No participants recruited from the NHS opted to meet with the chief investigator. The chief investigator met with a total of four participants recruited via OCD and anxiety related charitable organisations to fill out the questionnaire. All opted for the chief investigator to read out the questions and fill in the questionnaire.

2.5 Ethical issues

The project was reviewed by the University of Hertfordshire's School of Psychology Ethics Committee prior to commencement of the research, to allow early recruitment of the comparison group and the non-NHS OCD group (see Appendix 16 for the approval letter). Shortly following this, an application was made to a Local Research Ethics Committee and the study was approved for recruitment of participants from within three NHS Trusts within the geographical area (see Appendix 17 for the approval letter). Approval was also obtained from each of the Trust's Research and Development departments (see Appendix 18 for relevant correspondence).

The main ethical issues pertaining to the study included confidentiality of data, obligation to participate and potential distress resulting from taking part. The confidentiality issue was managed by informing all participants that all information gathered through the study would remain confidential. Only the chief investigator had access to information that would identify participants, and participants were informed that the chief investigator was bound by patient confidentiality limits as defined by the British Psychological Society (2000). All questionnaires were anonymised and numerically coded and locked in a secure location separate from any documents that may have identified participants, such as consent forms and contact detail sheets. All computerised data files were password protected and had no identifying information. To minimise any obligation participants may have felt to participate, particularly if recruited through clinicians within NHS services, the participant information sheet and consent forms clearly highlighted that individuals did not have to take part in the

study, that they could withdraw at any time without giving a reason and that their decision to take part would in no way affect their future healthcare.

The nature of the study was such that the questionnaire asked about personal feelings and experiences as well as thoughts and beliefs specific to OCD sufferers. Because of this, there was potential for participants to experience distress as a result of taking part. The chief investigator sought to reduce the likelihood of this by making it clear that all participants could contact her for further advice and support in the event that they experienced distress. The chief investigator's contact details were therefore placed on the front sheet of the questionnaire and on the participant information sheet. In addition, each participant received an information leaflet containing contact details of local and national mental health services and charitable organisations (Appendix 19).

It was planned that in the event that a participant reported experiencing distress as a result of taking part, they would be advised by the chief investigator in the first instance to contact their local general practitioner (GP). If the participant was currently involved in mental health services, they would be advised to contact their mental health professional. In addition, information for the participant's GP was included in the questionnaire pack so that in the event that the participant did experience distress as a result of taking part, and visited their GP, the GP would have information on the study and what it had entailed (Appendix 20). However, no participant reported experiencing distress as a result of filling out the questionnaire. Finally, all participants were asked whether they wanted to receive a summary of the results, and all participants were sent a debriefing sheet (Appendix 21) with a copy of their signed consent form.

3. RESULTS

SPSS for Windows was used to analyse the data (SPSS, 2003). First, inclusion into the OCD group and the aggregation of the OCD group is discussed. Second, the results of

the exploratory data analysis are presented with relevant descriptive statistics, including the demographic features of the two groups. Following this, the analyses examining group differences are presented and the associated hypotheses discussed. The relationships between attachment, self-concept clarity, OC-related beliefs and OC symptoms are then presented. Finally, the plausibility of OC-related beliefs as a mediating variable is examined. In interpreting the following results, the guidelines suggested by Cohen (1988, cited in Sheskin, 2000) were followed with regard to the strength of correlations. Specifically, a small effect size is considered not more than 0.3; a medium effect size is considered not more than 0.5 and a large effect size is considered greater than 0.5.

3.1 Inclusion into the OCD group

It was observed that half the NHS-recruited participants ($N = 5$), who had a confirmed psychiatric diagnosis of OCD, did not fulfil the DSM-IV (APA, 1994) criteria on the screening measure for a diagnosis of OCD. As this indicated problems with the validity of the screening measure, it was not used to include participants into the OCD group. The OCI-R clinical cut off score alone, therefore, was used to include participants into the OCD group.

3.2 OCD group aggregation

As individuals experiencing OCD were recruited from different sources (NHS, $N = 10$; non-NHS organisations, $N = 34$) the data were inspected to identify any differences between them demographically (Appendix 22) and on the dependent variables. The two groups were similar for age, age of onset, gender, marital status, family history of OCD, socio-economic status. As expected, the NHS-recruited group contained more individuals who were receiving treatment than the non-NHS recruited group (90% and 44.1% respectively). Table 1 shows the levels of depression, OC-related beliefs and OC symptoms for the NHS and non-NHS recruited groups.

Table 1. Levels of depression, OC-related beliefs and OC symptoms for the NHS-recruited OCD and non-NHS recruited OCD group

Variable	NHS-recruited OCD group (N = 10) Mean (SD)	Non-NHS recruited OCD group (N = 34) Mean (SD)
Total BDI-II score	23.50 (14.01)	28.00 (13.28)
Total OBQ-44 score	194.00 (61.46)	207.18 (57.62)
Total OCI-R score	39.20 (14.62)	39.06 (11.48)

Although due to the low numbers in the groups *t* tests could not be performed (Cohen, 1992), as can be seen from Table 1, there did not appear to be large differences between the two groups in terms of levels of depression, OC symptoms and OC-related beliefs. Therefore the groups were aggregated.

3.3 Exploratory data analysis and descriptive statistics

Exploratory data analysis was performed in order to examine any distribution anomalies and ascertain the appropriate statistical procedures to perform, as recommended by Coakes (2005). A total of four missing values were identified in the data set, three within the OBQ-44 and one within the SCCS. As recommended by Marczyk *et al.* (2005) these values were replaced with the item group mean.

3.3.1 Descriptive statistics for the comparison and OCD groups

A total of 78 participants took part in the study: 34 in the comparison group and 44 in the OCD group. Table 2 shows the descriptive statistics for the two groups. As this table shows, most of the variables exhibited normal distributions with no significant skewness or kurtosis. Levines tests indicated that the variances of the two groups were unequal thus violating the homogeneity of variance assumption of the independent samples *t* test. However, the *t* test is argued be robust even when one or more of its

assumptions is violated (Sheskin, 2000). Welkowitz et al. (2000) recommend only using non-parametric tests when these statistical assumptions are violated and the two sample sizes are significantly unequal, for example, the larger sample size is more than 1.5 times greater than the smaller sample. This was not the case for this study, therefore t tests were used to test for a mean difference between the two groups for hypotheses one to three. These analyses are reported with equal variances not assumed.

Table 2. Descriptive statistics for the comparison ($N = 34$) and OCD groups ($N = 44$)

	Mean	SD	Median	Minimum	Maximum	Skewness	Kurtosis
Comparison Group							
Attachment anxiety	2.09	0.76	2.03	1.00	4.22	0.76	0.66
Attachment avoidance	2.23	0.80	2.31	1.00	3.89	0.15	-0.69
SCCS total score	46.29	7.55	47.00	32	60	-0.27	-0.69
OCI-R total score	5.38	4.05	5.00	0	13	0.30	-0.95
OBQ-44 total score	100.00	24.16	104.00	61	164	0.35	0.31
OBQ-44 RT subscale	36.97	11.01	34.00	21	68	1.02	0.90
OBQ-44 ICT subscale	20.47	8.22	18.50	12	43	1.26	1.03
OBQ-44 PC subscale	42.56	13.92	43.50	16	71	-0.02	-0.88
BDI-II total score	3.76	3.37	3.00	0	11	0.59	-0.94
OCD Group							
Attachment anxiety	4.09	1.61	4.39	1.00	6.61	-0.31	-1.11
Attachment avoidance	3.57	1.29	3.67	1.11	5.89	-0.54	-1.06
SCCS total score	32.52	10.22	33.50	14	55	0.08	-0.62
OCI-R total score	39.09	12.08	36.00	21	71	0.60	-0.17
OBQ-44 total score	204.18	57.98	220.00	86	280	-0.50	-1.01
OBQ-44 RT subscale	79.00	25.14	86.00	20	111	-0.78	-0.46
OBQ-44 ICT subscale	44.32	19.64	48.50	12	83	-0.03	-1.18
OBQ-44 PC subscale	80.86	23.06	89.00	32	111	-0.64	-0.90
BDI-II total score	26.98	13.42	24.00	0	51	0.14	-0.86

Two univariate outliers were identified by examining the boxplots for each dependent variable (Figures 5 to 9). The recommendations of Tabachnick and Fidell (2001) were followed with regards to these outliers. Specifically, the scores were converted into standardised scores and were excluded from the analysis if they exceed 3.29. Using this method, no scores were identified as significant outliers. As recommended by Tabachnick & Fidell (2001), Mahalanobis distance method was conducted to check for multivariate outliers. Using this method, no outliers were detected in the data set ($\chi^2(9) = 27.88, p < .01$).

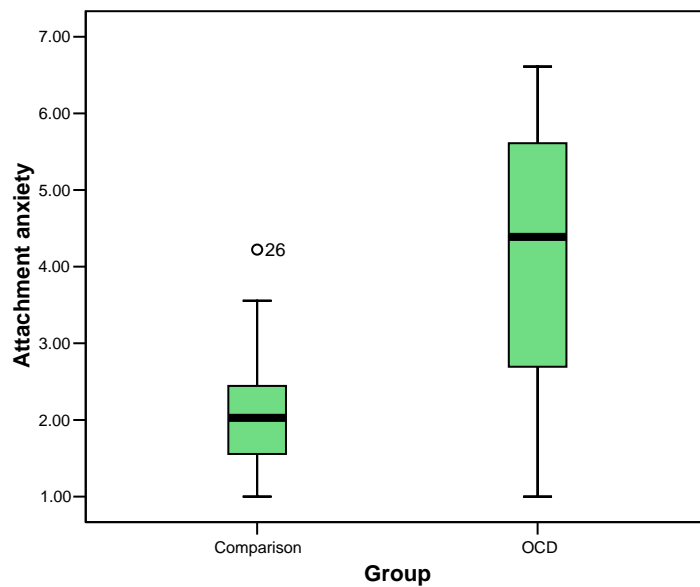


Figure 5. Boxplot showing attachment anxiety for the comparison and control groups

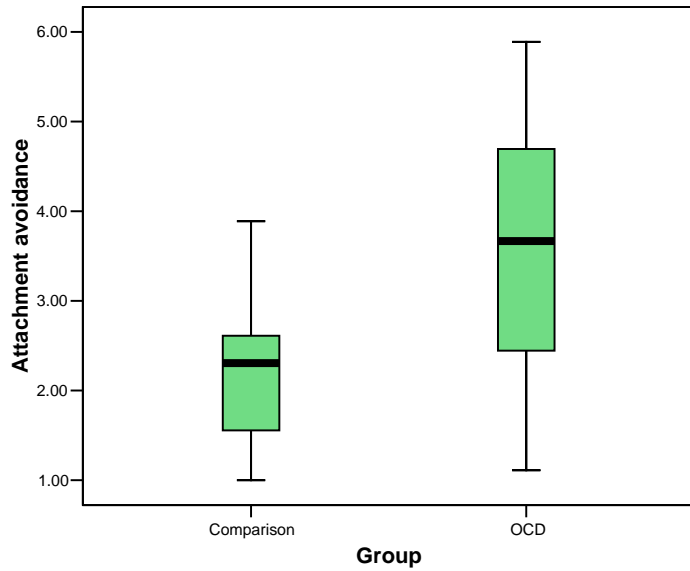


Figure 6. Boxplot showing attachment avoidance for the comparison and control groups

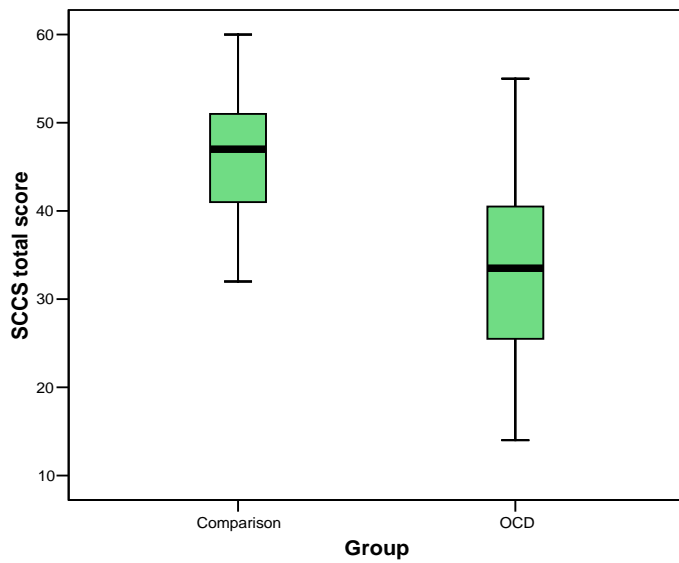


Figure 7. Boxplot showing the total self-concept clarity score for the comparison and control groups

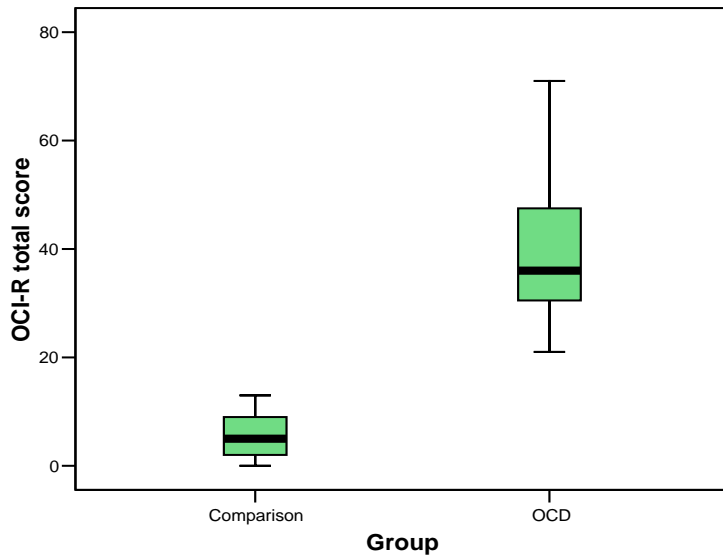


Figure 8. Boxplot showing the total OCI-R score for the comparison and control groups

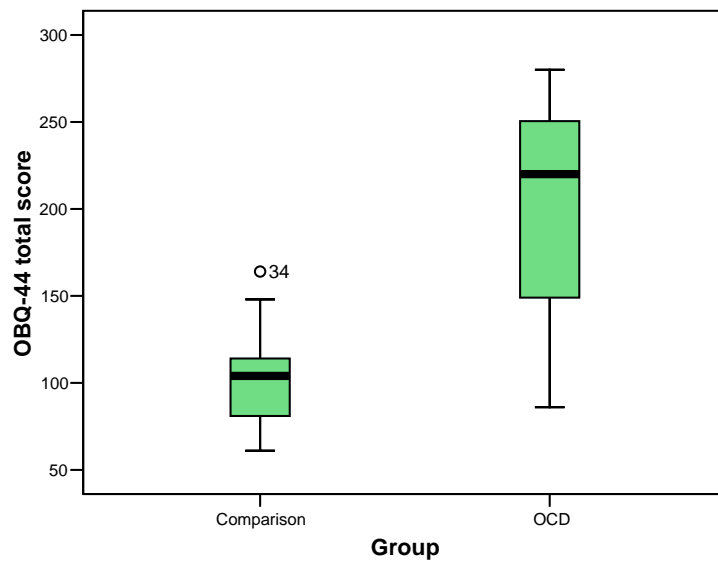


Figure 9. Boxplot showing the total OBQ-44 score for the comparison and control groups

3.3.2 Demographic features of the comparison and OCD groups

The demographic features of the two groups were examined and are presented in Table 3. The mean age for the comparison group was 39.4 (SD = 12.78) and for the OCD group was 37.8 (SD = 12.26). A *t* test found no group differences for age ($t(73) = 0.54, p = 0.59$).

Table 3. Demographic features of the comparison and OCD groups

Demographic Variable		Comparison group <i>N</i> = 34	OCD group <i>N</i> = 44
		<i>N</i> (%)	<i>N</i> (%)
Gender	Male	9 (26.5)	14 (31.8)
	Female	25 (73.5)	30 (68.2)
Ethnicity	White British	30 (88.2)	37 (84.1)
	White Irish	-	1 (2.3)
	White other	3 (8.8)	3 (6.8)
	Mixed white asian	1 (2.9)	-
	Mixed other	-	1 (2.3)
	Asian other	-	1 (2.3)
Marital status	Single	10 (29.4)	24 (54.5)
	Married	17 (50.0)	13 (29.5)
	Re-married	1 (2.9)	2 (4.5)
	Separated	3 (8.8)	1 (2.3)
	Divorced	3 (8.8)	4 (9.1)
Qualifications	None	1 (2.9)	2 (4.5)
	GCSEs	3 (8.8)	8 (18.2)
	A levels	2 (5.9)	9 (20.5)
	First degree	13 (38.2)	5 (11.4)
	Higher degree	13 (38.2)	10 (22.7)
	Other	2 (5.9)	10 (22.7)
Employment Status	Employed	25 (73.5)	18 (43.2)
	Self-employed	5 (14.7)	2 (4.5)
	Unemployed	-	4 (9.1)
	Retired	4 (11.8)	5 (11.4)
	Student	-	3 (6.8)
	On sick leave	-	10 (22.7)
	Looking after home/family	-	1 (2.3)
Socio-economic status	Managerial & professional	29 (87.9)	23 (53.5)
	Intermediate occupations	2 (6.1)	9 (20.9)
	Small employers & account workers	1 (3.0)	--
	Lower supervisory & technical	-	6 (14.0)
	Semi-routine & routine	1 (3.0)	5 (11.6)

As the majority of participants in the two groups were classed as white (97% in the comparison group, 93.2% in the OCD group), no statistical test was required to explore differences in ethnicity between the groups. The similarities between the groups on other demographic variables were examined further by applying statistical techniques. To compare both groups on employment, the data was dichotomised by collapsing the categories of employed and self-employed to form the variable employed, and collapsing unemployed, retired, student, sick leave and looking after home/family categories to form the variable unemployed. There were significantly more unemployed individuals in the OCD group ($\chi^2 = 10.96$, d.f. = 1, $p = .01$).

There were no differences between the groups on gender ($\chi^2 = 0.26$, d.f. = 1, $p = .61$). To compare the groups on qualifications, the no qualifications and GCSE categories were combined to form the category school educated and the first degree and higher degree categories were combined to form the category university educated. It was found that significantly more individuals in the comparison group were university educated ($\chi^2 = 14.26$, d.f. = 3, $p = .02$, Fisher's exact test). To compare the groups on socio-economic status, the five classes were collapsed to three following recommendations by the Office for National Statistics (2005). The results showed that the OCD group consisted of significantly more people with lower socio-economic status ($\chi^2 = 12.43$, d.f. = 2, $p = .02$). To compare the groups on marital status, the separated and divorced categories were combined. No significant differences between the groups for marital status ($\chi^2 = 4.93$, d.f. = 2, $p = .09$, Fisher's exact test) were found.

3.4 Group differences in relation to OC-related beliefs, attachment insecurity and self-concept clarity: Testing hypotheses one to three

T-tests were used to test the hypotheses that individuals who report OC symptoms will have higher levels of OC-related beliefs (hypothesis one), have a greater degree of attachment insecurity (hypothesis two), and exhibit less self-concept clarity (hypothesis three), compared with individuals who do not report having mental health difficulties. As Table 4 shows, the groups differed significantly on total OC-related

belief level, which had the largest effect size, and all of the associated subscales of the OBQ-44. Specifically, the OCD group had significantly higher levels of OC-related beliefs compared with the comparison group, supporting hypothesis one. In addition, the OCD group had a greater degree of attachment anxiety and avoidance compared with the comparison group, thus supporting hypothesis two. Finally, the OCD group also showed significantly lower levels of self-concept clarity, which supported hypothesis three.

Table 4. *T*-test statistics for hypotheses one to three

Hypothesis	Mean difference (95% CI)	T (d.f.)	<i>P</i> value (one-tailed)*	Cohen's d
1. Differences in OC beliefs				
Total OBQ-44 score	104.18 (84.84 to 123.53)	10.77 (61)	<i>p</i> < .01	2.35
RT subscale	42.03 (33.57 to 50.49)	9.93 (62)	<i>p</i> < .01	2.16
ICT subscale	23.85 (17.29 to 30.41)	7.27 (61)	<i>p</i> < .01	1.58
PC subscale	38.31 (29.90 to 46.71)	9.08 (72)	<i>p</i> < .01	2.01
2. Differences in attachment				
Attachment anxiety	1.99 (1.44 to 2.55)	7.23 (64)	<i>p</i> < .01	1.59
Attachment avoidance	1.34 (0.87 to 1.82)	5.65 (73)	<i>p</i> < .01	1.25
3. Differences in self-concept clarity				
SCCS	-13.77 (-9.76 to -17.78)	-6.84 (76)	<i>p</i> < .01	-1.53

* Bonferroni adjustment was used in light of the increased likelihood of a Type I error due to multiple comparisons.

3.5 Results relating to relationships between OC-related beliefs, attachment insecurity, self-concept clarity, OC symptoms and depression: Testing hypotheses four and five

3.5.1 Relationship between attachment insecurity and self-concept clarity

It was hypothesised that a greater degree of attachment insecurity will be associated with less self-concept clarity in both the OCD and comparison groups (hypothesis four). Scatterplots were used to examine the bivariate distributions of attachment anxiety, attachment avoidance and self-concept clarity in the two groups (see Figures 10 and 11).

3.5.1.1 Attachment anxiety and self-concept clarity

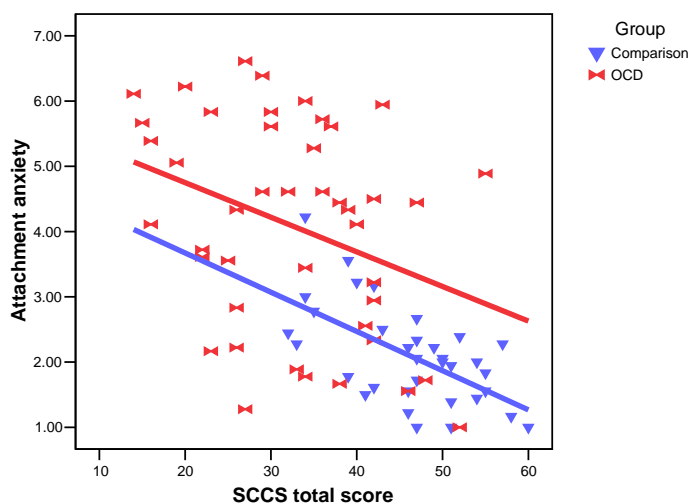


Figure 10. Scatterplot to show the association between attachment anxiety and self-concept clarity for each group

Figure 10 shows that a linear relationship exists between self-concept clarity and attachment anxiety in both groups. Pearson correlations confirmed a significant negative relationship between attachment anxiety and self-concept clarity for the OCD group ($r = -.34$; $N = 44$, $p < .05$, one-tailed) and the comparison group ($r = -.60$; $N =$

34, $p < .01$, one-tailed). To test the significance of this difference, a model was fitted to the data containing attachment anxiety as the dependent variable and self-concept clarity as the covariate. The F statistic for this interaction was $F(1,75) = 12.51$; $p = .01$. Therefore the relationship between attachment anxiety and self-concept clarity for the comparison group was significantly higher than in the OCD group.

As it was anticipated that depression may be a potential confounder, the correlations between depression, attachment anxiety and self-concept clarity were examined. It was found that levels of depression were significantly correlated with self-concept clarity for the OCD group ($r = -.50$; $N = 44$, $p < .01$) and the comparison group ($r = -.47$; $N = 34$, $p < .01$). In addition, depression significantly correlated with attachment anxiety for the OCD group ($r = .59$, $N = 44$, $p < .01$), but not for the comparison group ($r = .08$, $N = 34$, $p = .33$).

As the strength of these correlations reached at least a medium effect size, a partial correlation was carried out for the OCD group in order to statistically control for the effects of depression. Once the effects of depression were controlled, the relationship between attachment anxiety and self-concept clarity in the OCD group no longer remained significant ($r = -.06$; d.f. = 41, $p = .70$, two-tailed).

3.5.1.2 Attachment avoidance and self-concept clarity

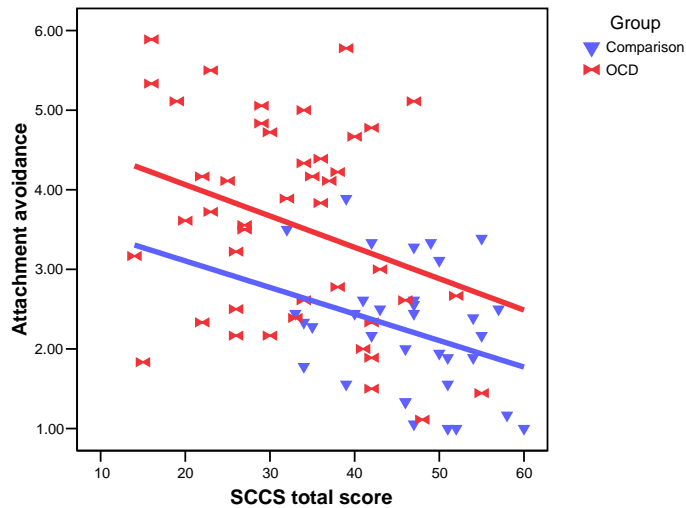


Figure 11. Scatterplot to show the association between attachment avoidance and self-concept clarity for each group

As can be seen from the Figure 11, a linear relationship was found between self-concept clarity and attachment avoidance in both groups. This relationship was significant for the comparison group ($r = -.32$; $N = 34$, $p < .05$, one-tailed) and the OCD group ($r = -.31$, $N = 44$, $p < .05$, one-tailed). In addition, levels of depression were significantly correlated with attachment avoidance in both the OCD ($r = .43$, $N = 44$, $p < .01$) and the comparison groups ($r = .30$; $N = 34$, $p < .05$). As the strength of these correlations reached at least a medium effect size, a partial correlation was carried out for both groups in order to statistically control for the effects of depression. Once depression was controlled, the relationship between attachment avoidance and self-concept clarity no longer remained significant for either the OCD group ($r = -.13$, $d.f. = 41$, $p = .43$, two-tailed) or the comparison group ($r = -.21$, $d.f. = 31$, $p = .24$, two-tailed).

In summary, no significant relationship was found between self-concept clarity and attachment insecurity once depression was controlled, thus the hypothesis that a greater degree of attachment insecurity will be associated with less self-concept clarity in both groups was not supported.

3.5.2 Relationship between OC symptoms, OC-related beliefs and self-concept clarity

It was hypothesised that less self-concept clarity will be associated with a greater degree of OC symptoms and OC beliefs in both the comparison and OCD groups (hypothesis five). First, scatterplots were used to examine the bivariate distributions of OC symptoms (OCI-R total score), OC-related beliefs (OBQ-44 total score) and self-concept clarity in the two groups (Figures 12 and 13).

3.5.2.1 OC symptoms and self-concept clarity

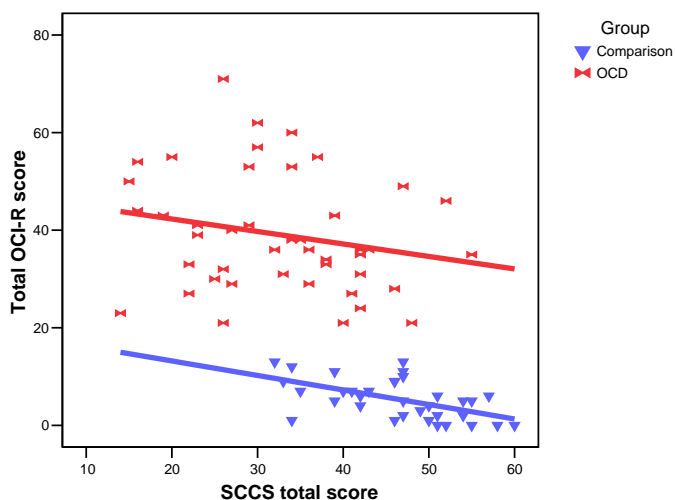


Figure 12. Scatterplot to show the association between OC symptoms and self-concept clarity for each group

As can be seen from Figure 12, for the comparison group, higher self-concept clarity was associated with lower degree of OC symptoms ($r = -.55$, $N = 34$, $p < .01$, one-tailed). However, this relationship was found to not be significant for the OCD group, ($r = -.22$, $N = 44$, $p = .08$, one-tailed).

In view of the weak correlation between the total OCI-R score and self-concept clarity in the OCD group the decision was taken to explore the correlations between OC symptoms and self-concept clarity on a subscale level. Exploratory data analysis showed two scores to be significant outliers within the OCI-R washing and checking subscales in the comparison group, therefore these cases were excluded from analyses (see Appendix 23 for OCI-R subscale boxplots). Furthermore, in the comparison group, the washing, checking and neutralising subscales of the OCI-R exhibited positive skewness and were leptokurtic (see Appendix 24 for descriptive statistics of the OCI-R subscales). Therefore non-parametric tests were used.

As expected, a floor effect was observed within the OCI-R subscales for the comparison group and thus correlational analyses were not performed for this group. As Table 5 shows, the obsessing, hoarding, ordering and neutralising subscale had a significant negative relationship with self-concept clarity whereas the washing and checking subscales had no significant relationship with self-concept clarity. Therefore the hypothesis that less self-concept clarity will be associated with greater degree of OC symptoms was partially supported.

Table 5. Spearman correlations between self-concept clarity and OCI-R subscales for the OCD group.

OCI-R subscale	OCD group Self-concept clarity <i>N</i> = 44
Obsessing subscale	-.28*
Washing subscale	.19 n.s.
Checking subscale	.22 n.s.
Hoarding subscale	-.31*
Ordering subscale	-.27*
Neutralising subscale	-.30*

* *p* < .05, (one-tailed)

3.5.2.2 OC-related beliefs and self-concept clarity

Scatterplots were used to examine the bivariate distributions of OC-related beliefs (OBQ-44 total score) and self-concept clarity in the two groups (Figure 13).

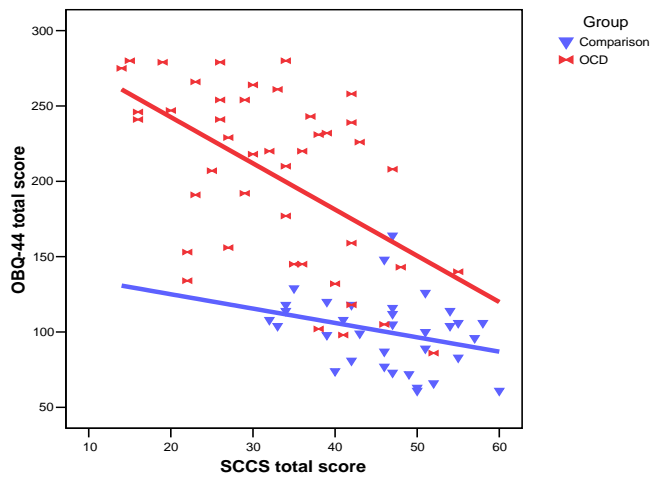


Figure 13. Scatterplot to show the association between OC-related beliefs and self-concept clarity for each group

As Figure 13 shows, higher levels of OC-related beliefs were associated with less self-concept clarity for the comparison group ($r = -.30$; $N = 34$, $p < .05$, one-tailed) and the OCD group ($r = -.54$; $N = 44$, $p < .01$, one-tailed). Furthermore, the relationship between self-concept clarity and the OBQ-44 subscales was also significant for the OCD group, reaching at least a medium effect size (see Table 6). However, only the perfectionism/certainty subscale was significantly associated with self-concept clarity in the comparison group.

Table 6. Pearson correlations between self-concept clarity and OBQ-44 subscales for each group

OBQ-44 subscale	Comparison group	OCD group
	Self-concept clarity $N = 34$	Self-concept clarity $N = 44$
Responsibility/threat estimation (RT)	-.13 n.s.	-.41**
Importance/control of thoughts (ICT)	-.07 n.s.	-.43**
Perfectionism/certainty (PC)	-.38*	-.54**

* $p < .05$, ** $p < .01$ (one-tailed)

As depression was identified as a potential confounder, the associations between levels of depression and the OBQ-44 were examined. As Table 7 shows, for the OCD group, higher levels of depression were associated with all OC-related belief subscales and the total score. All these subscales, except the PC subscale, had large effect sizes. No significant relationships were observed in the comparison group.

Table 7. Pearson correlations between BDI-II and OBQ-44 subscales for each group

OBQ-44	Comparison group	OCD group
	Depression score N = 34	Depression score N = 44
Responsibility/threat estimation (RT)	.06 n.s.	.62**
Importance/control of thoughts (ICT)	.13 n.s.	.56**
Perfectionism/certainty (PC)	.13 n.s.	.44**
Total score	.14 n.s.	.64**

** $p < .01$ level (one-tailed)

A partial correlation was conducted in order to control for depression. As can be seen from Table 8, once depression was controlled for, the relationship between self-concept clarity and the OBQ-total score and PC subscale remained significant, but the RT and ICT subscales did not.

Table 8. Partial correlations between self-concept clarity and OBQ-44 subscales for the OCD group when depression is controlled

OBQ-44	OCD group
	Self-concept clarity N = 44
Responsibility/threat estimation (RT)	-.15 n.s.
Importance/control of thoughts (ICT)	-.22 n.s.
Perfectionism/certainty (PC)	-.41**
Total OBQ score	-.34*

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

In summary, the hypothesis that less self-concept clarity will be associated with a greater degree of OC symptoms and OC-related beliefs in individuals who report OC symptoms and in individuals who do not report mental health difficulties was partially supported.

3.6 Results relating to hypotheses concerning OC-related belief mediation: Testing hypotheses six and seven

3.6.1 Preliminary analyses

The results presented so far have demonstrated significant differences between the groups on OC-related beliefs, OC symptoms, attachment security and self-concept clarity. It was hypothesised that OC-related beliefs will mediate the relationship between attachment security and degree of OC symptoms (hypothesis six), and between self-concept clarity and OC symptoms (hypothesis seven) in individuals who report OC symptoms, therefore the following analyses focused on the OCD group alone.

Following the recommendations of Baron and Kenny (1986), the bivariate distributions of OC symptoms and OC-related beliefs and symptoms were examined. As Figure 14 and 15 shows, there was a significant positive correlation between OC symptoms and OC-related beliefs for the OCD group ($r = .44$; $N = 44$, $p < .01$, one-tailed).

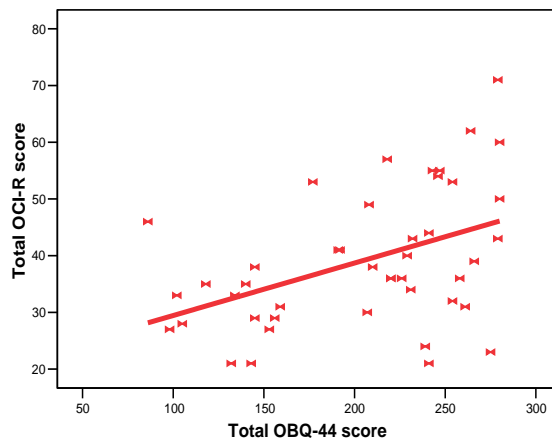


Figure 14. Scatterplot to show the association between OC-related beliefs and OC symptoms for the OCD group

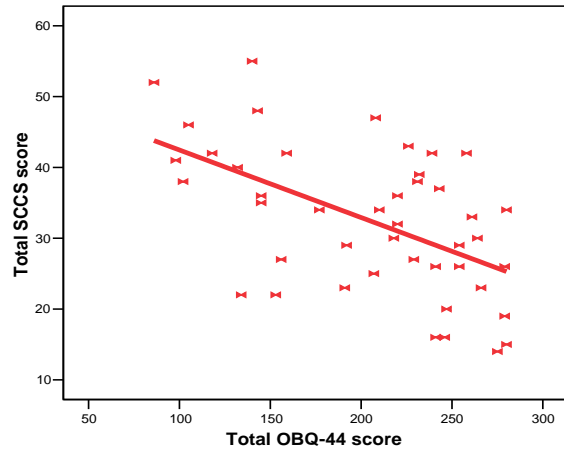


Figure 15. Scatterplot to show the association between self-concept clarity and OC-related beliefs for the OCD group

Preliminary correlational analyses were conducted to test for a relationship between attachment anxiety/avoidance and OC symptoms. As Table 9 shows, significant relationships were found between the total OCI-R score and both attachment dimensions, whereas only the obsessing and ordering subscale were positively associated to attachment anxiety, and only the neutralising subscale was positively associated to attachment avoidance. Therefore it was decided that the analysis would focus on the total OCI-R score.

Table 9. Spearman correlations between attachment security and OC symptoms for the OCD group

OCI-R	OCD group N = 44	
	Attachment anxiety	Attachment avoidance
Obsessing subscale	.43**	.11 n.s.
Washing subscale	.16 n.s.	.07 n.s.
Checking subscale	-.03 n.s.	-.10 n.s.
Hoarding subscale	.15 n.s.	.12 n.s.
Ordering subscale	.36**	.25 n.s.
Neutralising subscale	.15 n.s.	.29*
Total score	.42**	.31*

* $p < .05$, ** $p < .01$, (one-tailed)

3.6.2 Path analyses

Path analysis was used to test whether OC-related beliefs were acting as a mediator between attachment and OC symptoms and between self-concept clarity and OC symptoms (Maruyama, 1998). Figure 16 depicts the first conceptual path diagram that was tested. The path diagram specifies attachment anxiety, attachment avoidance and self-concept clarity to produce an indirect effect on OC symptoms via OC-related beliefs. Furthermore, it was explored whether self-concept clarity, attachment anxiety and attachment avoidance would produce direct effects on OC symptoms.

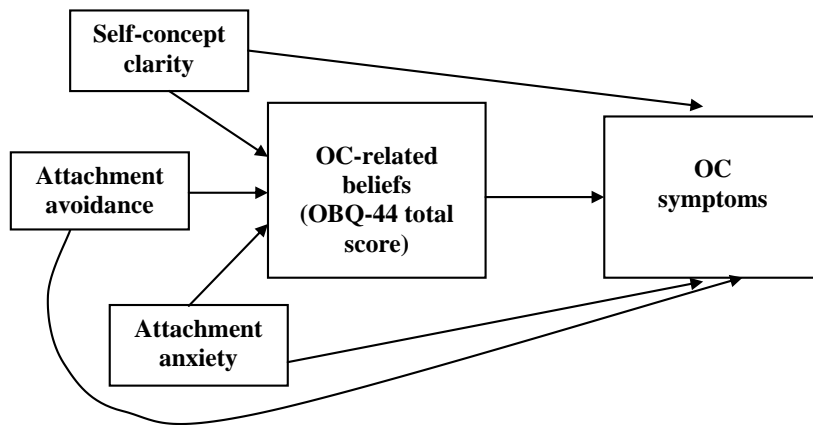


Figure 16. Conceptual path diagram (model a) relating self-concept clarity, attachment security, OC-related beliefs and OC symptoms

The path model was tested by conducting two multiple regression analyses. The first regression analyses contained OC-related beliefs (OBQ-44 total score) as the dependent variable and self-concept clarity, attachment anxiety and attachment avoidance as the predictor variables. The second regression analyses contained OC symptoms (OCI-R total score) as the dependent variable and OC-related beliefs, self-concept clarity, attachment anxiety and avoidance as the predictor variables. The results are presented in Table 10 and Figure 17.

Table 10. Results of the regression analysis for model (a)

First regression analysis: Full model (N = 44)					
Dependent variable	Predictors	Standardised β	t	p value	R²
OBQ-44 Total score	SCCS	-.45	-3.26	.02	.37
	Attachment anxiety	.30	2.13	.04	
	Attachment avoidance	-.01	-0.86	.93	
Second regression analysis: Full model (N = 44)					
OCI-R total score	SCCS	.09	.53	.60	.25
	Attachment anxiety	.18	1.11	.28	
	Attachment avoidance	.12	.79	.44	
	OBQ-44 total score	.38	2.19	.03	
Third regression analysis: Trimmed model (N = 44)					
OCI-R total score	OBQ-44 total score	.44	3.22	.03	.20

The results of this analysis showed that there were no significant direct effects of self-concept clarity, attachment anxiety or attachment avoidance on OC symptoms. Furthermore, attachment avoidance did not have a direct effect on OC-related beliefs. However, self-concept clarity was found to have a significant direct effect on OC-related beliefs, which in turn had a significant direct effect on OC symptoms. Similarly, attachment anxiety had a significant direct effect on OC-related beliefs, which in turn had a significant direct effect on OC symptoms. These results suggest

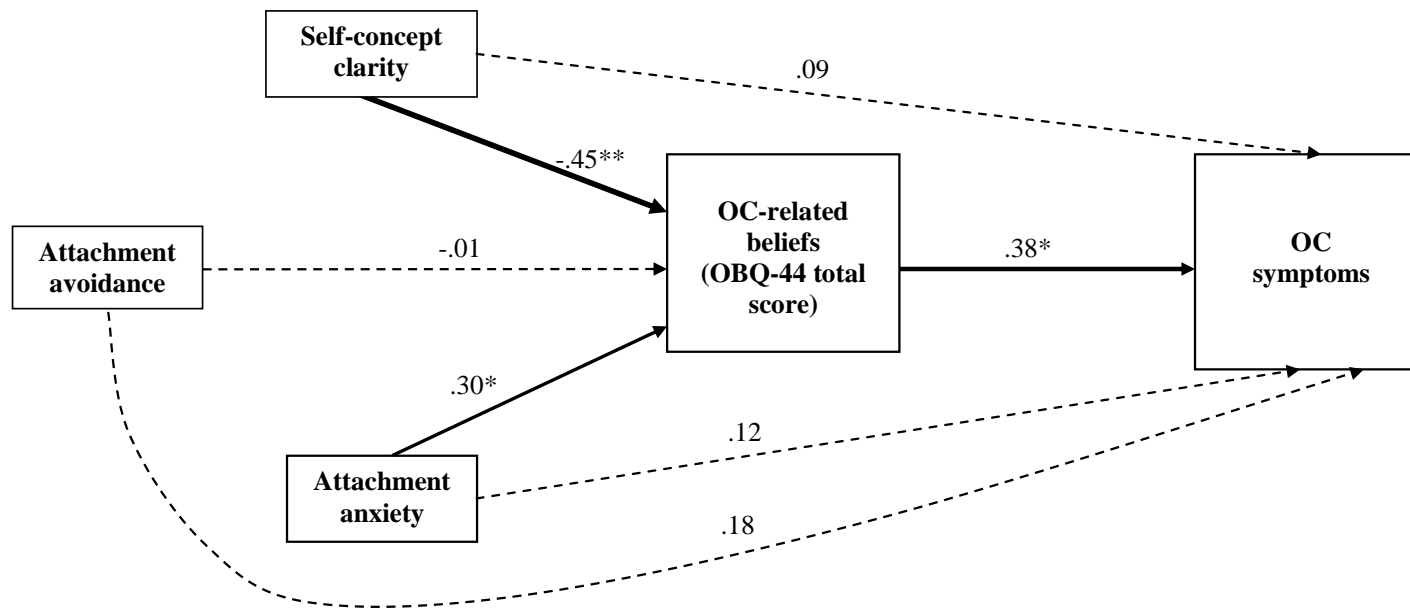


Figure 17. Full path diagram (model a) relating self-concept clarity, attachment security, OC-related beliefs and OC symptoms.

The figures next to each path represent the standardised regression coefficients (β).

* $p < .05$, ** $p < .01$, dotted lines represent non-significant paths

that OC-related beliefs mediate the relationship between self-concept clarity and OC symptoms, and attachment anxiety and OC symptoms.

To investigate the impact of removing attachment avoidance from the path diagram, a model trimming approach was used in which the reduced model was estimated using a further regression analysis. The results of the trimmed model are presented in Table 10 and Figure 18.

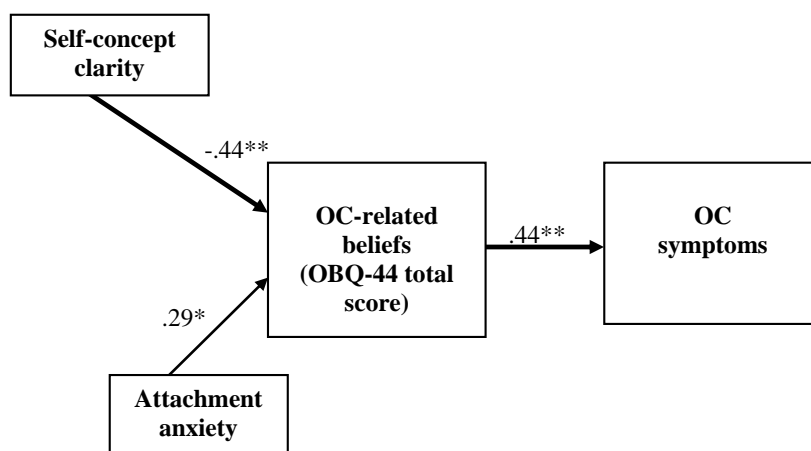


Figure 18. Trimmed path diagram (model a) relating self-concept clarity, attachment anxiety, OC-related beliefs and OC symptoms

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

To calculate the indirect effect of self-concept clarity on OC symptoms and attachment anxiety on OC symptoms for this trimmed model, the path coefficients were multiplied (Maruyama, 1998). The indirect effect of self-concept clarity on OC symptoms ($\beta = -.19$) and attachment anxiety on OC symptoms ($\beta = .13$) were weak compared with the direct effect of OC-related beliefs on OC symptoms.

In summary, the hypothesis that OC-related beliefs would mediate the relationship between attachment security and OC symptoms was partially supported. The

hypothesis that OC-related beliefs would mediate the relationship between self-concept clarity and OC symptoms was fully supported.

Although no hypotheses were formulated regarding the influence of depressed mood, as depression was found to be significantly associated with self-concept clarity, attachment anxiety/avoidance, OC-related beliefs and OC symptoms, the contribution of depression was explored further in a post-hoc analysis. The model that was tested is presented in Figure 18. First, it was predicted that OC symptoms would have a direct effect on depression. This was based on the assumption that participants in the study experienced OCD as their primary problem, with depression secondary to their OCD. Second, as self-concept clarity was found not to have a direct effect on OC symptoms, but was found to exhibit strong correlations with depression, it was predicted that self-concept clarity would have a direct effect on depression. Finally, it was predicted that attachment anxiety would have a direct effect on depression, as research has shown that attachment insecurity is a vulnerability factor for depression rather than the result of current negative mood state (Haaga *et al.*, 2002). As attachment avoidance was found not to have a direct effect on OC-related beliefs or OC symptoms, it was not included in the model.

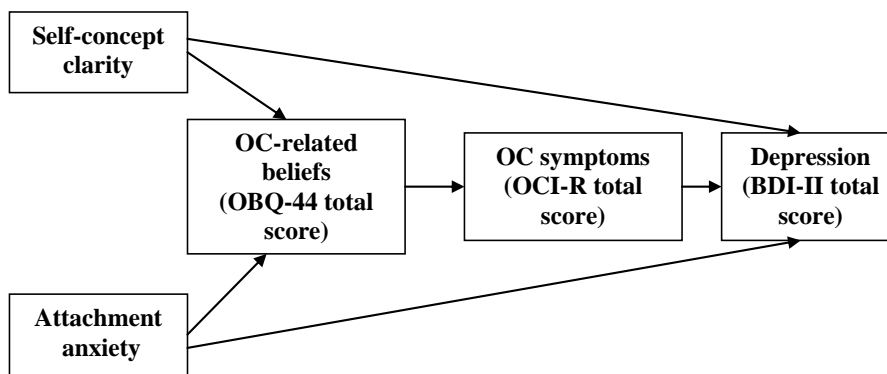


Figure 19. Conceptual path diagram (model b) relating self-concept clarity, attachment security, OC-related beliefs, OC symptoms and depression.

A regression analysis was conducted which contained levels of depression as the dependent variable and self-concept clarity, attachment anxiety and OC symptoms as the predictors. The results are presented in Table 11 and Figure 20.

Table 11. Results of the regression analysis for model (b)

Dependent variable	Predictors	Standardised β	<i>t</i>	<i>p</i> value	R²
BDI-II Total score	SCCS	-.31	-2.59	.01	.49
	Attachment anxiety	.41	3.24	.02	
	OCI-R total score	.21	1.76	.09	

It was found that OC symptoms had no significant direct effect on levels of depression. However, both self-concept clarity and attachment anxiety had significant direct effects on depression. Together, they explained 49% of the variance in levels of depression.

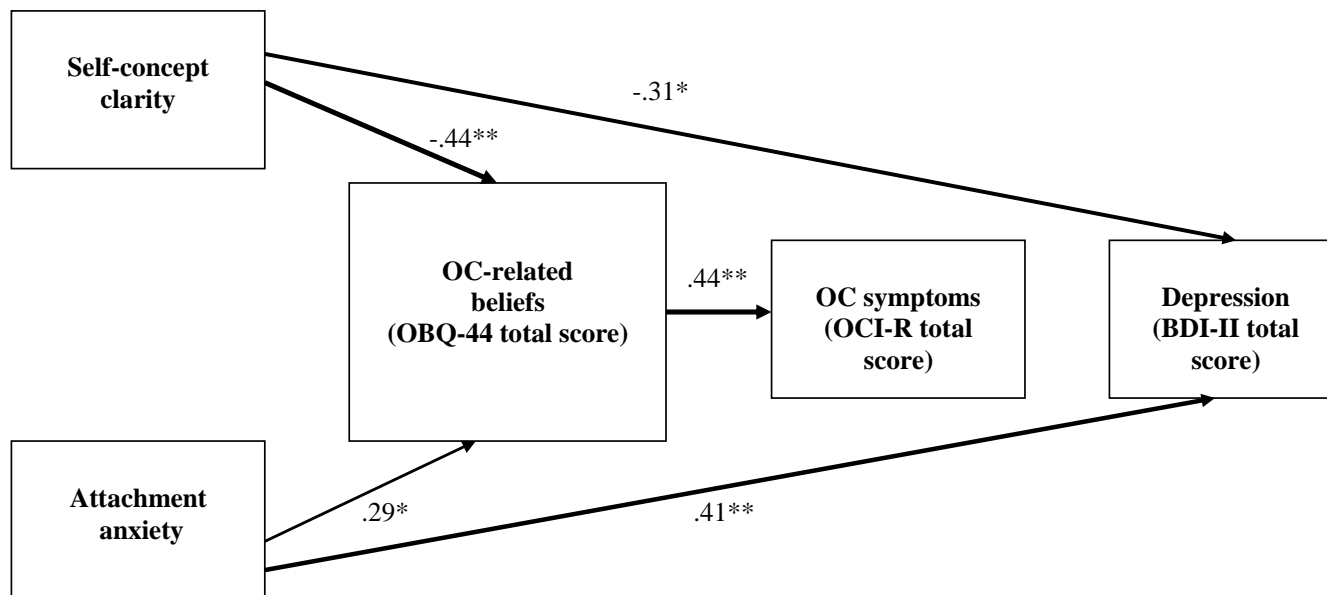


Figure 20. Full path diagram relating self-concept clarity, attachment security, OC-related beliefs, OC symptoms and depression.

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

4. DISCUSSION

4.1 Overview of findings

This study aimed to investigate the relationship between attachment, self-concept clarity and OC-related beliefs in OCD. The degree of attachment security, self-concept clarity and levels of OC-related beliefs in people who reported OC symptoms was investigated by comparing them to a group of people who reported not having a mental health problem. The hypotheses that individuals who experienced OCD would have a greater degree of attachment insecurity, report higher levels of OC-related beliefs and have less self-concept clarity than the comparison group were supported.

The relationships between attachment, self-concept clarity and OC-related beliefs were then examined. Attachment anxiety was negatively associated with self-concept clarity in both groups, indicating that the more self-concept clarity an individual exhibited, the less attachment anxiety they were likely to have. However, once levels of depression were controlled in the OCD group, attachment anxiety was no longer associated with self-concept clarity. Similarly, attachment avoidance was negatively associated with self-concept clarity in both groups, indicating that the more self-concept clarity an individual exhibited, the less attachment avoidance they were likely to have. However, once depression was controlled, this relationship was no longer significant in both the OCD and comparison groups. Therefore the hypothesis that a greater degree of attachment insecurity would be associated with less self-concept clarity was not supported.

Contrary to expectations, total levels of OC symptoms were not related to self-concept clarity in the OCD group. However, when symptom subscales were examined in the OCD group, negative relationships were found between obsessing, hoarding, ordering and neutralising symptoms and self-concept clarity. The association between washing and checking symptoms and self-concept clarity did not reach significance. In addition, OC-related beliefs were negatively associated with self-concept clarity in both groups, however, on a subscale level, only perfectionism/certainty beliefs were negatively associated with self-concept clarity in the comparison group, whereas all

subscales exhibited a significant relationship for the OCD group. After taking depression into account, only perfectionism/certainty beliefs and the total OC-related belief score were found to be associated with self-concept clarity in the OCD group. Overall, these results partially supported the fifth hypothesis that less self-concept clarity would be associated with a greater degree of OC symptoms and OC-related beliefs.

Finally, a path analysis revealed that for the OCD group, self-concept clarity, attachment anxiety and avoidance did not have significant direct effects on OC symptoms. However, OC-related beliefs mediated the relationship between self-concept clarity and OC symptoms, in addition to mediating the relationship between attachment anxiety and OC symptoms. Moreover, self-concept clarity had a stronger direct effect on OC-related beliefs compared with attachment anxiety. These results thus supported hypotheses six and seven that OC-related beliefs would mediate the relationship between attachment, self-concept clarity and OC symptoms.

In an additional post-hoc analysis, OC symptoms did not show a direct effect on levels of depression in the OCD group. However, a direct effect of attachment anxiety on depression was found in addition to a direct effect of self-concept clarity on levels of depression. This suggests that levels of depression in the OCD group is explained by the effect of low levels of self-concept clarity and high levels of attachment anxiety rather than OC symptoms.

4.2 The current findings in relation to theoretical issues and previous research

4.2.1 Findings in relation to attachment insecurity and self-concept clarity: Implications for attachment theory and Guidano and Liotti's (1983) model of OCD

The finding that people who experienced OCD exhibited a greater degree of attachment insecurity compared with individuals who did not report mental health

difficulties is consistent with attachment theory and previous research that has found insecure attachment to be associated with psychopathology in general (Fonagy *et al.*, 1996; Mason *et al.*, 2005; Reincke & Rogers, 2001). This study also adds to the limited evidence base that has found insecure attachment in people with OCD (Myhr *et al.*, 2004). This finding may also lend some support to the theoretical conjectures of Guidano and Liotti (1983), who suggest that individuals with OCD have experienced a particular early environment which leads to insecure attachment. In this study it was also found that the differences between the two groups in attachment anxiety exhibited a slightly larger effect size than the between-group differences in attachment avoidance, which may suggest that the OCD group experience more anxiety about being rejected or abandoned in their relationships. This also fits with Guidano and Liotti's (1983) theory which emphasises an early attachment environment in which the attachment figure's behaviour is contradictory, leading to a difficulty in developing a coherent and unambiguous set of expectations and beliefs about the self, and in particular about the reliability of others, which is indicative of attachment anxiety.

However, it must be noted that the assumption of this study was that the internal working models formed in early childhood remain stable throughout life, in line with the stability/continuity hypothesis of attachment theory (Bowlby, 1977; Cassidy, 2000). Therefore an individual's current degree of romantic attachment security is likely to reflect, in part, their degree of early attachment security (Fraley, 2004). However, attachment theory also posits that that internal working models can be updated (Bowlby, 1973). Furthermore, romantic attachment is likely to reflect a multitude of factors not measured in this study such as intimacy (George & West, 1999). Therefore the results of the study must be considered with caution in relation to Guidano and Liotti's (1983) model of OCD. However, it can be concluded that the findings suggest that people with OCD have more insecure attachments in their current relationships, but this may not necessarily mean that this reflects their early attachment experience.

It was found that the OCD group exhibited lower levels of self-concept clarity compared with individuals who did not report mental health difficulties. This is consistent with previous research that has found lower self-concept clarity to be associated with high neuroticism, higher levels of anxiety, depression and aggression in non-clinical samples (Campbell *et al.*, 1996; Smith *et al.*, 1996; Lawrence, 2006), and depression, social anxiety and OCD in clinical samples (Bigler *et al.*, 2001; Wilson & Rapee, 2006; Bhar, 2004). This finding also provides support for Guidano and Liotti's (1983) theory that people with OCD have developed a self-concept that is characterised by ambivalence and uncertainty. No study has investigated self-concept clarity in people with OCD before, although one study has investigated self-ambivalence, a narrower construct than clarity. The findings of the present study are in accordance with this research (Bhar, 2004), thus contributing to evidence that indicates people with OCD exhibit self-concepts that are characterised by more uncertainty, inconsistency and instability than people who do not have mental health problems.

Levels of depression were negatively associated with self-concept clarity in both groups suggesting that a negative mood state may impact on the certainty in which self-beliefs are held, or vice versa. This is consistent with the literature that has used non-clinical samples (Butzer & Kuiper, 2006; Dehart & Pelham, 2007). This also suggests that self-concept clarity is related to clinical depression as well as OCD, which is also consistent with previous research (Bhar 2004). In addition, self-concept certainty has also been found to be important in social phobia (Wilson & Rapee, 2006). Thus the current study adds to the increasing evidence that self-concept clarity is most likely a general characteristic of other mental health difficulties rather than being specific to OCD.

Additionally, attachment avoidance did not have either a direct or indirect effect on OC symptoms in this study. This is in line with previous research that has found attachment avoidance to be less strongly associated with problem coping and distress, and not to predict distress when attachment anxiety is controlled (Lopez *et al.*, 2002). Similarly, Williams and Riskind (2004) found that attachment anxiety was associated

with cognitive vulnerability to anxiety and depression, whereas attachment avoidance was only associated with cognitive vulnerability to anxiety. These findings could be explained in terms of Bartholomew and Horowitz's (1991) description of dismissing attachment style, as it is argued that individuals with this particular style will use defensive strategies to project an image of self-sufficiency.

No relationship was found between attachment security and self-concept clarity when depression was controlled in the OCD group. One interpretation of this is that attachment security and the degree of certainty in which self-beliefs are held are in fact unrelated constructs that have no mutual influence on each other. However, this is contrary to Guidano and Liotti's theory (1983) that argues early insecure attachment shapes the structure of an individual's self-representations. Consistent with this, previous research has found a link between romantic attachment and the content and structure of the self-concept in non-psychiatric samples, although in these studies negative mood was not controlled for (Kim, 2005; Mikulincer, 1995). The current study's findings could indicate that attachment security exerts influence on self-representations more in early life rather than in adulthood. However, it must be noted that Guidano and Liotti's (1983) theory concerns self-ambivalence, a different construct to self-concept clarity, which may also account for the difference in findings.

Self-concept clarity is a specific organisational component of the self-concept. The discrepancy between the current study's findings and the theoretical and empirical evidence could also be due to that fact that it is the *contents* of a person's self-concept, such as self-esteem, rather than the *structure* of the self-concept that is linked with degree of attachment insecurity. Research has found a consistent link between attachment and self-esteem, specifically, secure attachment is associated with higher self-esteem (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994; Bylsma *et al.*, 1997). Furthermore, recent research suggests that less fluctuations in self-esteem, or greater stability, is associated with less attachment anxiety, and this relationship is independent of actual level of self-esteem (Foster *et al.*, 2007).

4.2.2 Findings in relation to OC-related beliefs and self-concept clarity: Implications for Clark's (2004) cognitive control theory of obsessions

It was found that people who reported OC symptoms exhibited higher levels of OC-related beliefs compared with people who reported not having a mental health problem. This is consistent with the cognitive appraisal model of OCD which argues that people with OCD appraise their intrusive thoughts as threatening due to pre-existing dysfunctional OC-related beliefs (OCCWG, 2003). The finding that importance/control of thought beliefs were unrelated to self-concept clarity after controlling for depression is contrary to empirical and theoretical expectations. Clark (2004) argues that one of the vulnerability factors for OCD is the presence of enduring dysfunctional meta-cognitive beliefs, specifically, beliefs about the importance of controlling of thoughts. Another vulnerability factor is an uncertain/ambivalent self-concept. Together these vulnerability factors set the stage for individuals to appraise their unwanted thoughts as threatening. Thus according to this model, beliefs regarding importance/control of thoughts and self-concept clarity should be related in people with OCD. The model is supported by a pattern that has emerged across studies which shows that beliefs concerning importance/control of thoughts have a more robust relationship with OCD than the other OC-related beliefs (Tolin *et al.*, 2006).

In contrast, beliefs relating to the perfectionism/certainty were found to be associated with self-concept clarity after controlling for depression in this study. One interpretation of this finding in relation to Clark's (2004) model is that perfectionism/certainty beliefs and certainty of self-beliefs have a more important role in the development and maintenance of OCD, rather than beliefs regarding the importance or control of thoughts. However, previous research has found self-ambivalence to be correlated to *all* OC belief domains after controlling for anxiety and depression (Bhar, 2004). A less extreme interpretation is that perfectionism/certainty beliefs are an equally important factor that predisposes individuals to interpret their intrusive thoughts as threatening. In his account of OCD, Clark (2004) does not elaborate further as to why an intrusion leads to efforts to eliminate it other than that it

represents a contradiction to core values. In light of the current findings, an extension of this model could be entertained. An intrusive thought that contradicts a person's core values is not only experienced as alien to an already fragile self-concept, as Clark (2004) argues, but also because it is interpreted by the person as *lacking in control and/or certainty*, for example, of themselves, of events or their future. A sense of lack of control/certainty is also likely to reinforce any perfectionism/certainty beliefs that are activated in the presence of an intrusion.

It is possible that it is this lack of control together with the contradiction of valued aspects of the self that produces a need to gain control and certainty by eliminating the thought from consciousness. This is consistent with the view that OCD is characterised by a need for control and perfection (Guidano & Liotti, 1983) and that anxiety in general is characterised by the appraisal of events as out of one's control (Chorpita & Barlow, 1998; Barlow, 2000). Indeed, in an early study, Beck *et al.* (1987) found evidence for anxiety to be characterised by cognitions with themes of uncertainty that were future-orientated. More recent research investigated this by presenting non-clinical participants with four scenarios that varied in terms of threat level and responsibility. It was found that a lower sense of control predicted higher distress and urge to take action, after controlling for threat and responsibility appraisals (Moulding *et al.*, in press). However, it must be noted that this interpretation of the current study's findings is tentative as the total OC-related belief score was also associated with self-concept clarity when depression was controlled for. As the path analysis only investigated the role of the total level of OC-related beliefs, it is not known how each different type of belief domain impacts on OC symptoms.

4.2.3 Findings in relation to the relationships between attachment, self-concept clarity and OC-related beliefs

The results show that a more uncertain self-concept in addition to a greater degree of attachment insecurity impacts on OC-related beliefs, which in turn has a direct effect on OC symptoms. This may suggest that OC-related beliefs develop out of an insecure

attachment experience and less certainty about self-beliefs, which then produces OC symptoms. This would be consistent with the cognitive appraisal account of OCD that argues dysfunctional beliefs underlie the development of OC symptoms (OCCWG, 2003). However, self-concept clarity was found to have a stronger direct effect on OC-related beliefs compared with attachment anxiety. This could suggest that self-concept clarity has a stronger role in the development of OC-related beliefs. In contrast, the findings may indicate that insecure attachment may be a more distal vulnerability factor, in line with previous research (Williams & Riskind, 2004). In addition, attachment anxiety had a stronger role in influencing depression compared with OC-related beliefs. This is perhaps not unexpected given that depression is characterised by thought content that centres on significant loss (Beck, 1976), and attachment anxiety concerns anxiety and vigilance about rejection by others (Foster *et al.*, 2007).

It is of note that self-concept clarity and attachment insecurity accounted for only 37% of the variance in OC-related beliefs and that OC-related beliefs only accounted for 20% of the variance in OC symptoms, indicating that other factors also impact on OC cognitions and symptoms. For example, Clark (2004) argues that negative affectivity is a key vulnerability factor in OCD, although research investigating whether negative affectivity has a direct effect on OC symptoms has been mixed (Sexton *et al.*, 2003; Norton *et al.*, 2005). In addition, the role of parenting practices in the development of OCD is still not fully understood, although it has been suggested that a childhood characterised by strict and rigid codes of conduct and duty may lead to the development of particular OC-related beliefs (Salkovskis *et al.*, 1999).

4.2.4 Findings in relation to OCD symptoms

Interestingly, only particular OC symptoms were related to self-concept clarity in this study. Specifically, lower self-concept clarity was most strongly related to a greater degree of hoarding and neutralising symptoms and more weakly related to obsessing and ordering symptoms, but not related to washing and checking symptoms or the total score. The lack of a relationship between the total score and washing and checking symptoms could be linked to a limited sample size. However, it may also

suggest that individual symptom subscales are more useful in assessing OC symptoms rather than total scores, at least with the OCI-R (Foa *et al.*, 2002). Indeed, it has been previously noted that as individuals typically present with a highly idiosyncratic set of OC symptoms, the total OCI-R score may be suppressed by the items that are not relevant to an individual's symptoms (Abramowitz, *et al.*, in press). This reflects the more general argument that OCD is more likely to be a heterogeneous disorder with specific symptom subtypes (McKay *et al.*, 2004).

It is possible that this study's findings suggest that certain types of OC symptoms are characterised more by a lack of clarity in self-concept compared with others. For example, hoarding behaviour, which had the strongest negative correlation to self-concept clarity, may emerge in an attempt to establish a concrete and tangible felt sense of security and control that is not experienced internally and/or externally. Indeed, research has shown that hoarders consider their possessions to be part of themselves and provide a source of security and comfort (Frost & Hartl, 1996; Steketee *et al.*, 2003). Consistent with this study, Bhar (2004) found that contamination fears and rituals had the weakest relationship to self-ambivalence. In contrast, it was shown that self-ambivalence most strongly related to checking symptoms. However, comparing these findings with the current study is difficult as different measures of OC symptoms were used in each, which may account for the difference in findings. However, whether OCD should be understood as defined subtypes or more dimensional in nature is currently a controversial issue in the literature, and as yet no consensus has been reached (Taylor, 2005).

Finally, OC symptoms did not have a direct effect on levels of depression in OCD. Interpreting this result is difficult as no rigorous assessment was conducted to determine whether levels of depression were primary or secondary to participants' OCD, particularly within the non-NHS group. Research suggests that depression is more likely to be secondary to OCD (Rasmussen & Eissen, 1992), and is hypothesised to be characterised by domestic conflict, prospect of unemployment, loss of self-esteem and a subsequent pessimistic view of the future (Tallis, 1995). However, little is known about whether specific or more general aspects of experiencing OCD lead to

secondary depression (Tallis, 1995). Assuming OCD was the primary difficulty of participants in this study, the findings suggests that it is the experience of having a more uncertain view about themselves and a higher level of attachment insecurity that may lead to depression in OCD, rather than the experience of the OC symptoms. However, it must be noted that the measure used to assess OC symptoms in this study is relatively brief and is weighted more towards measuring compulsions (Foa *et al.*, 2002). Therefore the results may be specific to these types of symptoms. However, the possibility that a more comprehensive measure would show a link between symptoms and depression cannot be ruled out.

4.3 Implications for clinical practice

The current study has shown that people with OCD are more insecurely attached in their relationships than people who do not have mental health difficulties, in particular anxiety about their relationships with others. This has implications for the therapeutic relationship as patients may enter into treatment with expectations that the therapist may reject them in some way, or may have difficulties trusting the therapist. If OCD patients' attachment organisation has been shaped by an early attachment environment that was contradictory and contained mixed message of acceptability and rejection as Guidano and Liotti (1983) have suggested, the therapist would have to be mindful of this. For example, it is possible that patients with high attachment insecurity are hypervigilant to subtle verbal and non-verbal cues from the therapist which could be interpreted as indicating rejection in some way and could, therefore, adversely affect the treatment alliance (Foster *et al.*, 2007).

The finding that OC-related beliefs had a mediational role in the relationship between attachment insecurity, self-concept clarity and OC symptoms has important implications for clinical practice. Firstly, this suggests that careful assessment of the beliefs associated with OC symptoms is necessary to gain a comprehensive understanding of an individual's symptom experience and thus to guide the formulation and treatment process. Secondly, in terms of treatment, this finding would support the use of cognitive techniques in the treatment of OCD, which is important given that the addition of cognitive techniques is a controversial issue in

the field, due to the current evidence that cognitive therapy is no more effective than behaviour therapy alone (NICE, 2005). For example, a cognitive approach to OCD would include modifying maladaptive appraisals of intrusive thoughts and the beliefs that accompany these appraisals. It may also involve a focus on metacognitive beliefs, as suggested by Clark's (2004) model, rather than an explicit focus on the *content* of maladaptive beliefs. This is consistent with other models that emphasise metacognition in the maintenance of emotional disorders. For example, the Self-Regulatory Executive Function (S-REF) model argues that metacognitive beliefs, such as the belief that thoughts are dangerous and can influence future harm outcomes in the case of OCD, guide coping responses to distressing body state or intrusive cognitions (Wells & Matthews, 1996; Matthews and Wells, 2000).

This study's findings may also contribute to a greater understanding of the difficulties observed in behavioural interventions. ERP can be particularly challenging for people with OCD as it requires an individual to be exposed to anxiety-evoking material and to not engage in the behaviour that they would normally use to reduce their anxiety (Steketee, 1993). It has been suggested that treatment refusal and drop out rates in ERP may be linked to apprehension and fear about the difficulty and intensity of the treatment (Maltby & Tolin, 2003; 2005). It is possible that a chronically unstable, inconsistent and uncertain sense of self is also a factor that contributes to this apprehension and anxiety for an individual about beginning treatment, particularly if beliefs about the need to be certain and perfect in all situations are also held. Thus a focus on increasing the stability, consistency and certainty of self-beliefs, at least initially, may help to engage individuals in the treatment. Moreover, the findings of this study suggests that an intervention of this kind may have an impact on OC-related beliefs, which in turn may reduce symptoms. For example, a cognitive approach could be adopted in which self-beliefs are identified and the certainty in which they are held is rated. Historical evidence for and against each self-belief could then be explored and a further certainty rating taken, which could then be compared to the original rating.

Finally, the findings may have implications for the way in which depression is managed in OCD. As a direct link was found between attachment/self-concept clarity and depression, but not OC symptoms, this suggests that increasing clarity and reducing attachment insecurity may impact on negative mood in OCD, at least, negative mood that is assumed to be secondary to the OCD. This is important given the high comorbidity rates (Abramowitz, 2004), particularly as research has shown that co-morbid depression is the single best predictor of poor quality of life, compared with obsessional symptoms and compulsions (Massellis *et al.*, 2003). Furthermore, there is evidence to show that patients with co-morbid depression in OCD show less improvement after a course of ERP than those without depression (Abramowitz *et al.*, 2000). Thus it is possible that an initial focus on decreasing self-concept uncertainty and increasing attachment security may have an impact on level of depression in people with OCD. However, as depression was not directly linked to OC symptoms in this study, it is not known whether this would have an effect on OC symptoms *per se*, but it may increase motivation to engage treatment for the OC symptoms.

4.4 Limitations of the study

4.4.1 Limitations relating to design and analysis

Difficulties were experienced with recruiting the optimum number of participants, which impacted on the sample size and inevitably the statistical power of the study. One implication of this is that it may have increased the risk of making a Type II error. Secondly, the study was cross-sectional and therefore no firm conclusions can be reached regarding the causal status of the constructs investigated. This is particularly important to note with regards to the path analyses, which cannot determine the causal relations among variables (Maruyama, 1998). The model that was tested was unidirectional and did not take into account any probable reciprocal effects. For example, it is plausible that depression influences OC symptoms directly, or, furthermore, that OC symptoms may influence self-concept clarity. Additionally, the model was not meant to be exhaustive, and it is likely that other factors influence the observed relationships. For example, a model that also includes self-esteem and levels of anxiety could perhaps account for more of the variance in OC-related beliefs

and symptoms. Furthermore, due to the limited sample size, the overall fit of the path models were not tested using statistical techniques.

4.4.2 Limitations relating to participants and recruitment

A limitation of the study is that the OCD group consisted of individuals who were recruited from non-NHS organisations as well as from the NHS. Ideally, all the participants in the OCD group would have been recruited from the NHS, as this would have ensured that participants had a confirmed diagnosis of OCD. Although efforts were made to develop a screening measure for this study, this was found to have questionable validity and was not used. Unfortunately, time limitations prevented the use of a standardised interview or the use of a clinician-rated measure such as the Yale-Brown Obsessive-Compulsive Scale (Goodman *et al.*, 1989). Thus for the majority of the OCD group, a psychiatric diagnosis of OCD could not be reliably determined. Equally, due to the use of self-report methods of measurement, it is not known whether any participants in the comparison group would have reached the criteria for a psychiatric diagnosis.

Furthermore, the cut-off for the total score on the OCI-R was used to distinguish participants with OCD, which was found to classify 64% of OCD participants from non-anxious controls in the original validation study (Foa *et al.*, 2002). However, in that study Foa *et al.* (2002) also found that the obsessing subscale was better at differentiating the two groups, correctly classifying 74% of the participants. The decision to use the total score was taken as the obsessing subscale only contains three items, and this has previously been cited as a significant shortcoming of the OCI-R (Clark, 2004). Despite this, it is possible that the cut off that was used resulted in inaccurate classification of the OCD group participants.

The OCD and comparison groups were not matched on demographic variables, and it was found that the comparison group consisted of individuals who were from a higher socio-economic status, had a higher rate of employment and had higher levels of qualifications compared with the OCD group. Therefore the differences in self-concept clarity and attachment security may have been due to those individuals

experiencing a better quality of life with more prospects rather than actual differences on these constructs. Furthermore, the individuals in the study were predominantly female and white in ethnic origin which limits the generalisability of the findings to males and other ethnic groups.

In addition, although the NHS and non-NHS OCD group appeared to be similar on many of the demographic variables, over half the non-NHS group were not receiving any treatment. Therefore some of the findings, particularly in relation to level of depressed mood and OC symptoms, may have reflected this. Anecdotally, participants recruited from support groups seemed to share the experience of previous treatment failures, thus it is possible that the majority of the OCD group may have consisted primarily of individuals with treatment-resistant OCD. Although it is difficult to know if this was the case, this may limit the generalisability of the findings.

4.4.3 Limitations relating to measures

Further methodological limitations include the sole use of self-report measures in this study. Given the heterogeneity in OCD, it is possible that the OBQ-44 does not capture all the belief domains that are important in the disorder (Taylor *et al.*, 2006). Furthermore, the accurate measurement of attachment by self-report is a particularly contentious issue in the literature. One difficulty is that internal working models are hypothesised to operate at least partially out of conscious awareness (Bowlby, 1980). This calls into question the accuracy of assessing adult attachment using self-report measures that focus on conscious reports. Moreover, Bowlby (1980) originally theorised that the attachment system is activated under certain conditions such as unavailability or unresponsiveness of the attachment figure. It has been subsequently argued that romantic attachment measures are unlikely to activate the attachment system (George & West, 1999). Therefore it is questionable whether these measures are in fact assessing the attachment construct as originally defined by Bowlby (1973; 1977; 1980).

In addition, measuring attachment on a general level at one point in time has been criticised as it only enables a limited view of working models, and thus the attachment

ratings of participants in this study may not generalise over time or across different contexts (Pietromonaco & Barrett, 2000). In addition, some people may defensively report they are *not* anxious when they actually are, thus the conscious beliefs people hold may not accurately reflect the underlying attachment organisation (Crowell *et al.*, 1999). Ideally, the study would have used the AAI (George *et al.*, 1985; cited in Fonagy *et al.*, 1996). Using this may have provided more of a direct test of Guidano and Liotti's (1983) theory that early attachment is important in the development of OCD.

A further issue that limits the inferences that can be drawn from the study is that levels of anxiety and self-esteem were not measured and therefore not controlled in the analyses. Low self-esteem has been observed in people with OCD (Ehnholt *et al.*, 1999) thus it is possible that the associations between self-concept clarity and OC symptoms could be due to low levels of self-esteem, particularly as self-concept clarity has been shown to be positively associated with self-esteem (Campbell *et al.*, 1996; Riketta & Ziegler, 2006; Kernis *et al.*, 2000). Although Campbell *et al.* (1996) argue that self-concept clarity is a relatively stable trait, research has found that self-concept clarity and self-esteem can fluctuate in response to daily events (DeHart & Pelham, 2007; Nezlek & Plesko, 2001). This highlights the possibility that the current findings may reflect a person's degree of clarity at a particular point in time rather than a dispositional characteristic. Finally, the differences in self-concept clarity may have been due to a general difficulty in making decisions in the OCD group, which is a feature of OCD (Farrell & Barrett, 2006).

4.5 Suggestions for further research

Further research is needed to advance the understanding of the role that attachment plays in the development and maintenance of OCD. For example, qualitative research could perhaps investigate the theoretical conjectures of Guidano and Liotti (1983) that people with OCD have experienced a specific early attachment environment characterised by ambiguous messages of love and rejection. Further research is needed to investigate whether techniques other than self-report measures produce similar results to this study, which could increase the validity of the findings

(Marczyk *et al.*, 2005). For example, interview methods such as the AAI (George *et al.*, 1985; cited in Fonagy *et al.*, 1996) and projective tests such as the Adult Attachment Projective (George & West, 2001) could be used in addition to priming techniques. The AAI (George *et al.*, 1985; cited in Fonagy *et al.*, 1996) maybe a particularly important measure to use as it assesses internal working models of attachment that operate outside conscious awareness (Maier *et al.*, 2004). This study did not attempt to convert the dimensional attachment scores into discrete attachment styles as it is argued that this results in a loss of precision and may have obscured group differences (Fraley & Waller, 1998). However, future research could investigate what types of attachment occur within OCD. For example, it could be argued that Guidano and Liotti's (1983) description of the early attachment experience in OCD corresponds to the preoccupied style of attachment, which is characterised by inconsistent messages of love from caregivers. Thus research could explore whether a preoccupied attachment style is specifically associated with OCD, compared to other attachment styles.

Furthermore, self-concept clarity in OCD could also be a focus of future research. For example, studies could aim to compare levels of self-concept clarity across psychiatric disorders, including anxiety and depression. This research should also attempt to measure self-concept clarity using different methods. For example, Wilson and Rapee (2006) used an experimental design to measure self-concept certainty. In addition, better understanding is needed of the similarities and differences between self-ambivalence and clarity. Whether self-concept clarity is a construct that fluctuates over time in people with OCD could also be another focus of research. Importantly, more empirical evidence is needed to support Clark's (2004) argument that self-concept fragility/uncertainty is a vulnerability factor in OCD. It may be interesting to examine the specific relationship between self-concept clarity and intrusive thoughts. For example, to explore whether people with OCD who interpret their intrusions as a threat to core values *also* have a sense of a lack of control/certainty, as suggested in this study.

Ideally future research that investigates attachment, self-concept clarity and OC-related beliefs would use longitudinal designs to investigate whether these factors predispose individuals to developing OCD. In addition, it would be important to explore whether increasing self-concept clarity leads to changes in OC-related beliefs, as suggested by the findings of this study. This could be done by comparing patients on a waiting list for treatment with a group of patients who receive a specific intervention focussed on increasing certainty in their self-beliefs. OC-related beliefs could be measured before and after the treatment to see whether any decrease in the strengths of the beliefs had occurred compared with the control group. Whether an intervention of this kind also improves levels of co-morbid depression in OCD could also be explored. In addition, research could investigate whether supplementing ERP with an intervention focussed on increasing self-concept clarity reduces drop out rates. Furthermore, as attachment insecurity was also found to have a direct effect on OC beliefs, it would be interesting to investigate whether the therapeutic relationship also influences the degree of attachment security OCD patients experience generally in their relationships with others.

It would be important for future studies in this area to control for self-esteem, difficulties in making decisions and levels of anxiety. In addition, studies with larger samples that collect more detailed information on treatment history would be necessary to control for potential confounding effects. Studies with larger sample sizes are also necessary to test for the reciprocal effects of different variables on OC symptoms and beliefs. Future research may also further explore the role that self-concept clarity and attachment insecurity play in producing depression in OCD. For example, it may be interesting to conduct a study in which depression, OCD without depression and OCD with co-morbid depression are compared.

5. CONCLUSIONS

This study found that individuals who reported OC symptoms had a greater degree of attachment insecurity, higher levels of OC-related beliefs and less self-concept clarity compared with individuals who reported not having mental health difficulties. In addition, the study found that higher levels of OC-related beliefs and in particular beliefs relating to perfectionism and certainty were associated with less self-concept clarity when levels of depression were statistically controlled. Furthermore, a path analysis revealed that the relationship between self-concept clarity and OC symptoms was mediated by OC-related beliefs. In addition, OC-related beliefs also mediated the relationship between attachment insecurity and OC symptoms. In a post-hoc analysis, self-concept clarity and attachment insecurity were found to have a direct effect on levels of depression in people who reported experiencing OC symptoms.

The findings of this study need to be treated with caution given the various limitations that have been outlined. However, the current findings appear to support Guidano and Liotti's (1983, 1985) vulnerability model of OCD, and some aspects of Clark's (2004) theory of obsessions. These theories broadly propose that an inconsistent early attachment experience produces an ambivalent/uncertain self-concept, which in turn leads to particular dysfunctional beliefs and therefore OC symptoms. Importantly, this study has shown that insecure attachment and an uncertain self-concept, which could predispose individuals to developing OCD, may be found in people's current experience of their symptoms. Whether these factors do increase a person's risk of developing OCD has yet to be established, however, this study represents a first step in investigating this.

The findings of this study do have important implications for the ways in which clinicians work therapeutically with individuals experiencing OCD. In particular, increasing a person's certainty about themselves may impact on any unhelpful beliefs that contribute to the maintenance of symptoms. The effectiveness of such an intervention has yet to be demonstrated. However, this study does suggest that whatever therapeutic approach is adopted, the possible influence of the way in which a person

with OCD experiences their relationships, and how stable, certain and consistent their self-beliefs are may aid understanding of arguably one of the most complex and debilitating emotional disorders.

6. REFERENCES

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Appendix 1

The Self Concept Clarity Scale (SCCS; Campbell *et al.*, 1996)

Appendix 2

The Experiences in Close Relationships – Revised (ECR-R; Fraley *et al.*, 2000)

Appendix 3

The Obsessive Compulsive Inventory – Revised (OCI-R; Foa *et al.*, 2002)

Appendix 4

The Obsessive Beliefs Questionnaire – short version (OBQ-44; OCCWG, 2003)

Appendix 5

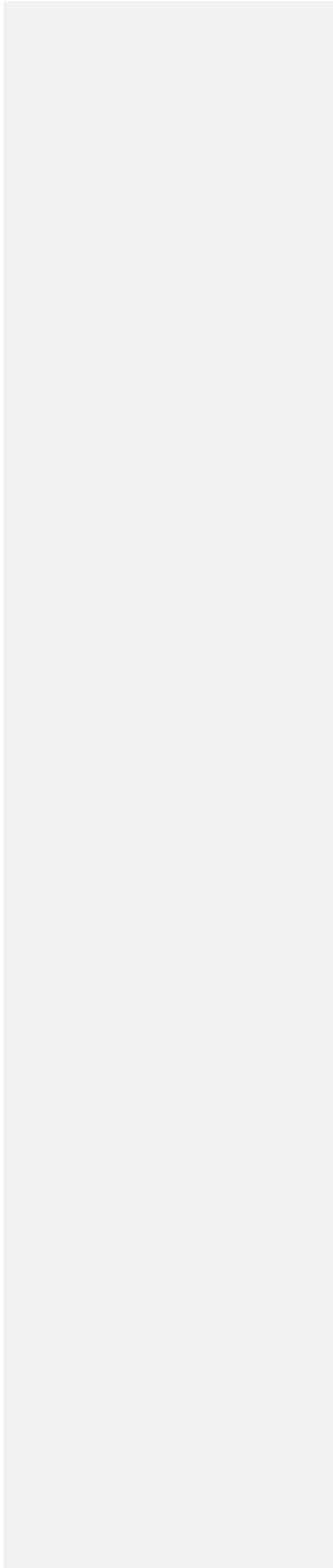
The Beck Depression Inventory – second edition (BDI-II; Beck *et al.*, 1996)

Appendix 6

The Symptom Checklist–90-Revised (SCL-90-R; Derogatis, 1994)

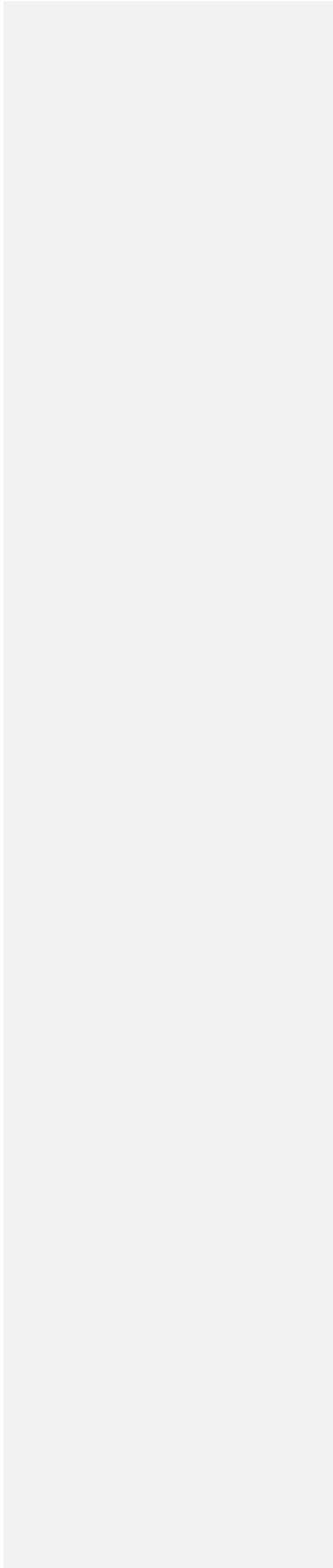
Appendix 7

Demographic questionnaire



Appendix 8

Screening questionnaire



Appendix 9

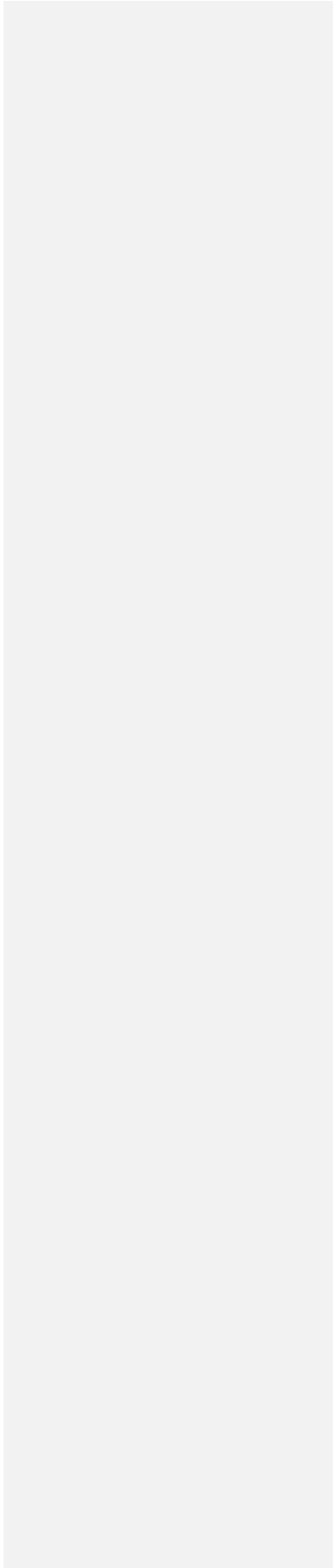
Clinician's information sheet

Appendix 10

Participants' information sheet

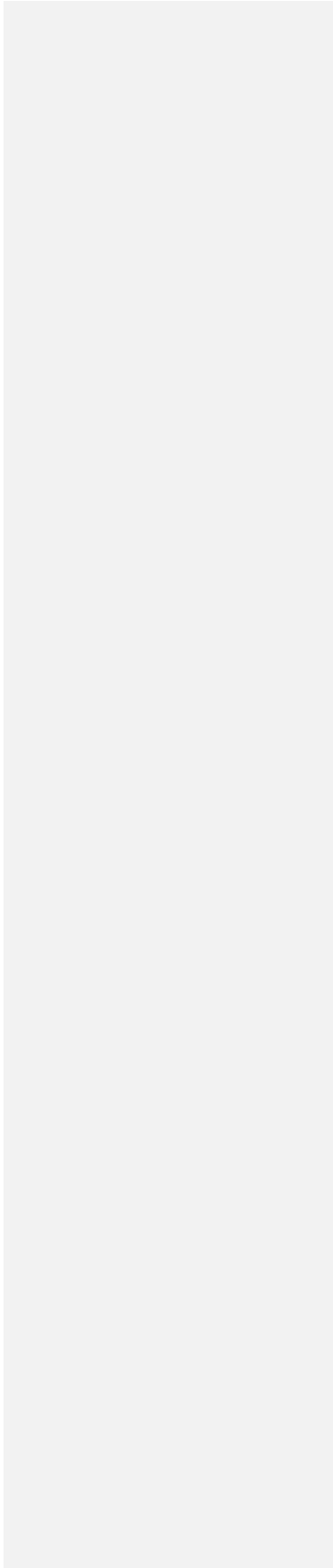
Appendix 11

Contact details sheet



Appendix 12

Consent form



Appendix 13

Advertisement for the non-NHS OCD group recruitment

Appendix 14

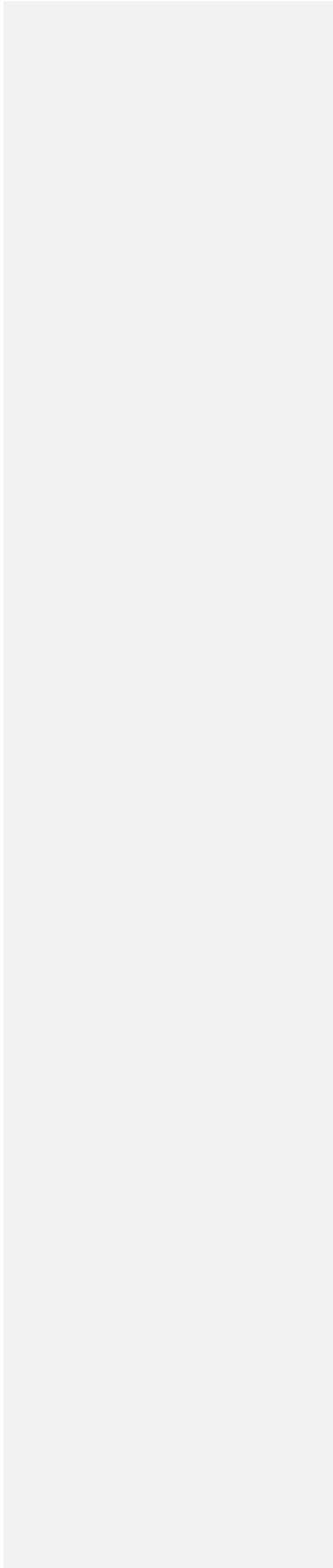
Advertisement for the comparison group recruitment

Appendix 15

Approval letter from the University of Hertfordshire's School of Psychology Ethics Committee

Appendix 16

Approval letter from the Local Research Ethics Committee

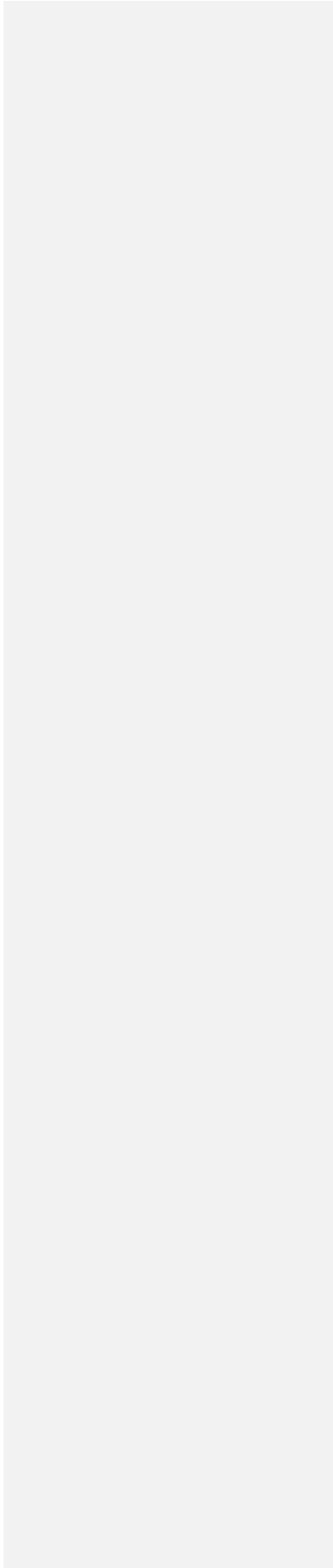


Appendix 17

Correspondence from each NHS Trust's Research & Development Department

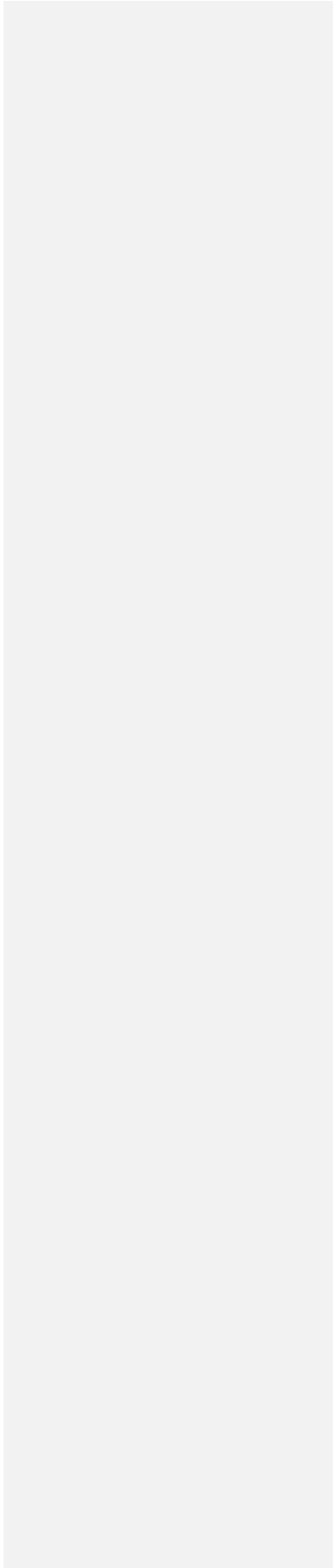
Appendix 18

Information leaflet



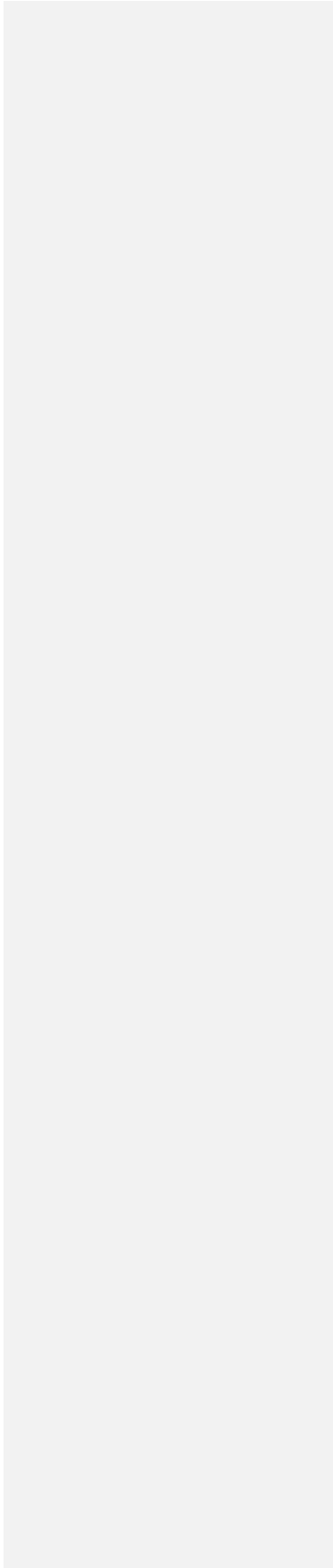
Appendix 19

GP information letter



Appendix 20

Debriefing sheet



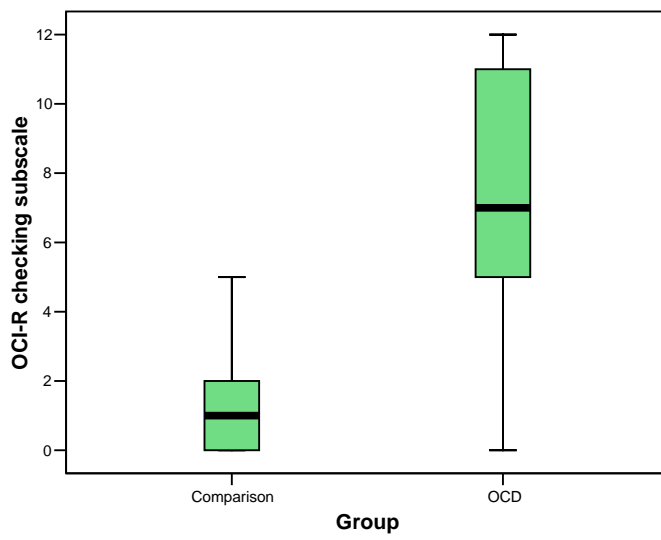
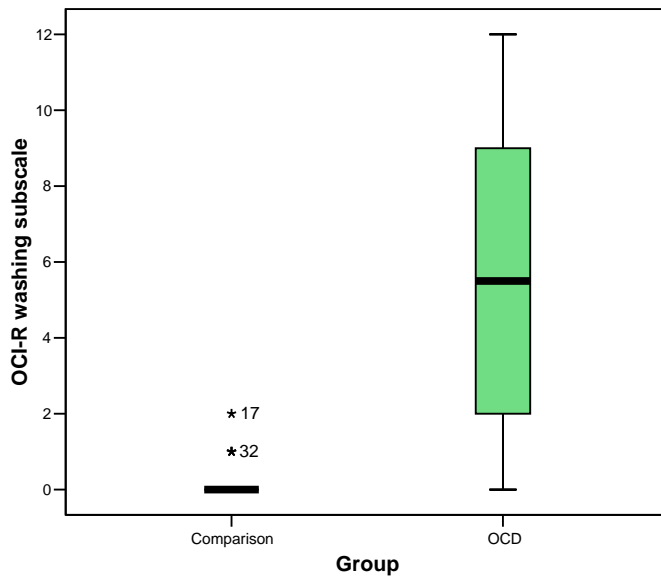
Appendix 21

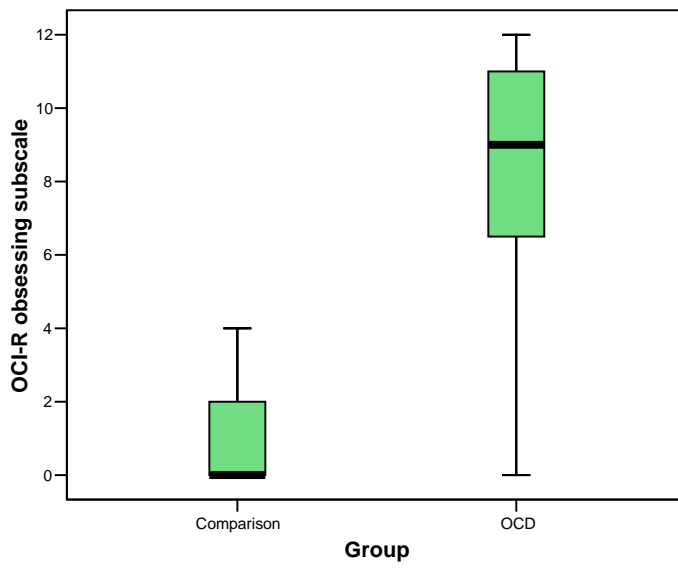
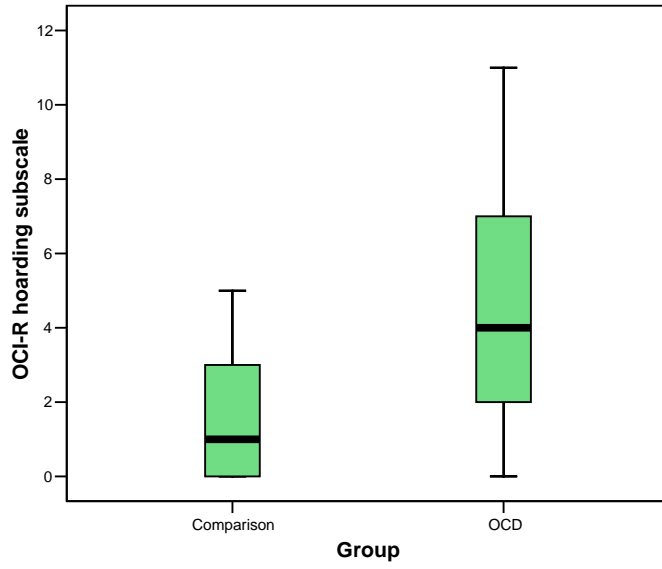
Table to show the demographic variables for the NHS-recruited OCD and non-NHS recruited OCD group

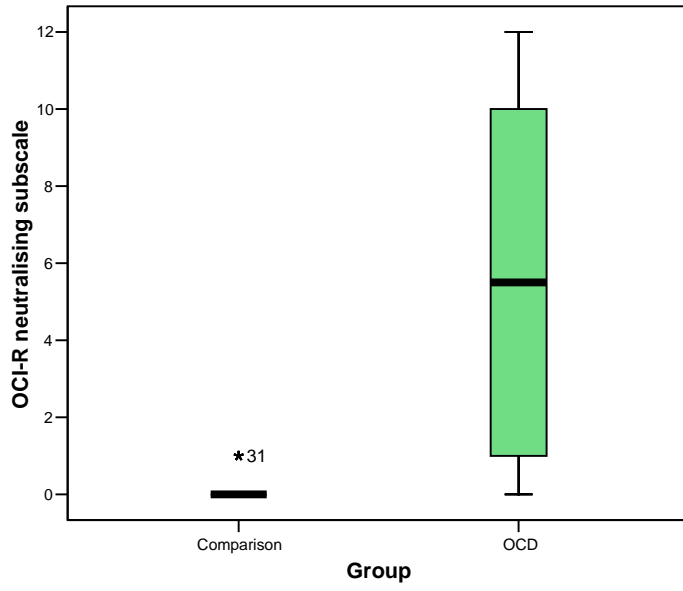
		NHS-recruited OCD group N = 10	Non-NHS recruited OCD group N = 34
		N (%)	N (%)
Mean age		37.70	37.82
Mean age of onset		21.56	15.13
Gender	Male	4 (40.0)	10 (29.4)
	Female	6 (60.0)	24 (70.6)
Marital status	Single	5 (50.0)	19 (55.9)
	Married	3 (30.0)	10 (29.4)
	Re-married	1 (10.0)	1 (2.9)
	Separated	-	1 (2.9)
	Divorced	1 (10.0)	3 (8.8)
Family history of OCD	No	5 (50.0)	22 (64.7)
	Yes	5 (50.0)	12 (35.3)
Employment	Unemployed	2 (20.0)	2 (5.9)
	Employed	4 (40.0)	15 (44.1)
	Self-employed	1 (10.0)	1 (2.9)
	Retired	1 (10.0)	4 (11.8)
	Student	-	3 (8.8)
	Sick leave	2 (20.0)	8 (23.5)
	Looking after home/family	-	1 (2.9)
Socio-economic status			
	Managerial & professional	5 (50.0)	18 (54.5)
	Intermediate occupations	2 (20.0)	7 (21.2)
	Lower supervisory & technical occupations	1 (10.0)	5 (15.2)
	Semi-routine & routine occupations	2 (20.0)	3 (9.1)
Treatment	None	1 (10.0)	19 (55.9)
	Medication	4 (40.0)	9 (26.5)
	Psychological therapy	1 (10.0)	3 (8.8)
	Medication & psychological therapy	4 (40.0)	3 (8.8)

Appendix 22

OCI-R subscale boxplots for the comparison and OCD groups







Appendix 23

Table to show the descriptive statistics for the OCI-R subscales for both groups

OCI-R Subscale	Mean	SD	Median	Minimum	Maximum	Skewness	Kurtosis
Comparison group							
Washing	0.15	0.44	0.00	0	2	3.16	10.21
Checking	0.97	1.22	1.00	0	5	1.56	2.83
Hoarding	1.62	1.56	1.00	0	5	0.69	-0.52
Ordering	1.56	1.62	1.00	0	5	0.41	-1.31
Obsessing	0.91	1.36	0.00	0	4	1.18	-0.14
Neutralising	0.18	0.39	0.00	0	1	1.78	1.23
OCD group							
Washing	5.52	4.07	5.50	0	12	0.20	-1.35
Checking	7.45	3.41	7.00	0	12	-0.34	-0.62
Hoarding	4.91	3.43	4.00	0	11	0.50	-0.81
Ordering	7.18	3.71	8.00	0	12	-0.35	-0.99
Obsessing	8.50	3.16	9.00	0	12	-0.87	0.47
Neutralising	5.52	4.53	5.50	0	12	0.10	-1.56

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2007

**4965 words including references, excluding title page and
tables/figures**

* To be submitted to the journal: Behaviour, Research and Therapy as a shorter
communication.

Attachment security, self-concept clarity and beliefs in obsessive-compulsive disorder.

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*This research was conducted by the first author, under supervision of the second and third authors, in fulfilment of the Doctorate in Clinical Psychology at the University of Hertfordshire.

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Acknowledgements: Thank you to Jorg Shultz for his assistance with the statistical analysis

Abstract

Ambivalent self-perceptions and attachment insecurity are seen as important factors in the development and maintenance of obsessive-compulsive disorder (OCD) (Guidano & Liotti, 1983; Clark, 2004). The purpose of this study was to examine whether self-concept clarity (SCC), a broader construct than self-ambivalence, was important in OCD. Participants were 44 individuals who reported experiencing OCD and 34 non-clinical community controls. Participants completed measures of SCC, attachment security, OCD symptoms, obsessive-compulsive (OC) beliefs and depression. Results showed that the OCD group exhibited significantly less SCC, more attachment insecurity and higher levels of OC beliefs. After partialling out depression, only general levels of OC beliefs and beliefs relating to perfectionism/certainty were negatively associated with SCC. Implications for the cognitive appraisal models of OCD and for clinical practice are discussed.

Keywords: self-concept, attachment, obsessive-compulsive disorder, beliefs

1. Introduction

The cognitive appraisal model of obsessive-compulsive disorder (OCD) proposes that symptoms develop because unwanted, intrusive thoughts are interpreted as highly significant or threatening, which leads to attempts to control the thought or neutralise the distress associated with it (Wells, 1997). Underlying these faulty misinterpretations are predisposing, enduring beliefs concerning inflated responsibility, overimportance of thoughts, overestimations of threat, perfectionism, intolerance of uncertainty and importance of controlling one's thoughts (Obsessive Compulsive Cognitions Working Group; OCCWG, 2003). However, the motivational factors underlying compulsive behaviours are unclear within the cognitive appraisal account (Bhar, 2004). It has been suggested that people are motivated to engage in compulsions because the intrusion contradicts perceived valued aspects of themselves (Rachman, 1998; Purdon & Clark, 1999). This has led some researchers to explore the role of the self-concept in the pathogenesis of OCD.

In his cognitive control theory of obsessions, Clark (2004) argues that an ambivalent and uncertain self-concept is a key vulnerability factor in OCD. Negative affectivity (a personality disposition that increases susceptibility to experience worry, anxiety and depression), and pre-existing metacognitive beliefs concerning the importance of intrusive thoughts and their control are also important contributors. Specifically, Clark (2004) argues that an uncertain, ambivalent self-concept may lead to a propensity to misinterpret unwanted intrusive thoughts as a 'threat to core personal values and ideals' (p.139). A central feature of obsessions that distinguishes them from other anxious thoughts is their ego-dystonic nature (Purdon & Clark, 1999). For example, Rachman (1998) noted that the intrusive thoughts that are most

likely to be misinterpreted as significant and threatening are those which are contrary to or threaten the person's system of values. Research shows that people with OCD usually evaluate their most upsetting obsessions as more meaningful and as contradicting valued aspects of the self to a greater degree than less upsetting ones (Rowa, Purdon, Summerfeldt, & Antony, 2005). Clark (2004) argues that it is the ego-dystonic nature of intrusions and the individual's pre-existing ambivalent self-view that leads to an appraisal of the intrusion as being contrary to important values or self attributes, and therefore as highly significant and threatening.

In their vulnerability model, Guidano and Liotti (1983) argue that OCD is characterised by self-ambivalence. They suggest that individuals who develop OCD have experienced a particular kind of attachment environment characterised by ambiguous messages of love and rejection. This produces two distinctly opposite, and equally plausible, interpretations of self and reality (Guidano & Liotti, 1983, 1985). If prolonged, this experience has the effect of producing an attitude towards reality and the self that simultaneously has opposite valences. Compulsive behaviours emerge as a means of unifying these opposing attitudes and perceptions of the self. According to this view, self-ambivalence is a higher-order construct which does not lead directly to OC symptoms, but enables the development of particular maladaptive beliefs, which in turn leads to symptoms (Guidano & Liotti, 1983).

Previous research has found a link between insecure attachment and psychopathology (Mason, Platts, & Tyson, 2005; Fonagy et al., 1996). However, only one study has investigated the link between attachment and OCD directly. Myhr, Sookman and Pinard (2004) measured recalled parental style and romantic attachment in 36 OCD patients, 16 patients diagnosed with depression or dysthymia and 26

healthy controls using a self-report measure. Controlling for depression, they found that the OCD and depressed groups exhibited higher attachment insecurity than the control group. Specifically, the OCD group and depressed group demonstrated more attachment anxiety than the control group, but they did not differ from each other.

Only one study has directly tested whether Guidano and Liotti's (1983) concept of self-ambivalence is relevant to OCD. Bhar (2004) developed a measure of self-ambivalence and found that compared with non-psychiatric controls, individuals diagnosed with OCD exhibited significantly higher self-ambivalence, after controlling for self-esteem and mood. However, this difference was not observed between the OCD group and an anxious control group. Using the Obsessive Beliefs Questionnaire-44 (OBQ-44; OCCWG, 2003), the relationship between self-ambivalence and OC symptoms was mediated by all the OC belief domains. However, no individual belief domain completely explained this relationship.

The present study examined whether individuals with OCD would exhibit higher levels of attachment insecurity in romantic relationships, higher levels of OC beliefs and lower levels of self-concept clarity (SCC). Self-concept clarity is defined as the extent to which the contents of the self-concept are 'clearly and confidently defined, internally consistent and temporally stable' (Campbell et al., 1996, p.141). SCC is similar to self-ambivalence. However, clarity is argued to be a broader construct as ambivalence is more concerned with the notion of an individual having both positive and negative self-beliefs, thus encompassing only a specific facet of clarity, that is, inconsistency (Campbell et al., 1996; Riketta & Ziegler, 2006). Therefore, based on previous research and theory (Guidano & Liotti, 1983; Bhar, 2004), it was hypothesised that OC beliefs would mediate the relationship between

self-concept clarity and OC symptoms, and mediate the relationship between attachment security and OC symptoms.

2. Method

2.1 Participants

Participants included 10 individuals with a psychiatric diagnosis of OCD, 34 individuals who self-reported OCD symptoms and 34 non-clinical community controls. Non-clinical community controls were included if they reported that they had not previously experienced or ever been treated for a mental health problem and were excluded if they scored within the clinical range on (a) the 90 item Revised Symptom Checklist List (SCL-90-R; score of greater than or equal to 63 on the global severity index, or if any two primary dimension scores are greater than or equal to a T score of 63; Derogatis, 1994), (b) the Obsessive Compulsive Inventory – Revised (OCI-R; Foa et al., 2002, total score of 21 or above) and (c) scored in the mild or moderate range of the Beck Depression Inventory – second edition (BDI-II, Beck, Steer, & Brown, 1996). All participants in the OCD group were included if they scored within the clinical range on the total score of the OCI-R. Participants with a psychiatric diagnosis of OCD were excluded if they had a diagnosis of learning disability, psychosis or current substance misuse.

2.2 Power analysis

A power analysis was conducted for each planned statistical analysis. This revealed that the minimum total number of participants needed to detect a medium effect size ($d = .50$), with a power level of at least .80, using a significance level of .05 was 170 (Cohen, 1992).

2.3 Measures

2.3.1 Self-Concept Clarity

The Self Concept Clarity Scale (SCCS) (Campbell et al., 1996) is a 12 item self-report measure that measures the extent to which self-beliefs are clearly and confidently defined, internally consistent and stable. Ratings are given on a five point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Items are summed, following appropriate reversals as indicated by Campbell et al. (1996), to form a total score reflecting degree of clarity. The total score ranges from 12 (low clarity) to 60 (high clarity). Campbell et al. (1996) reported good internal consistency of the scale, high levels of test re-test reliability good construct validity and criterion validity. Cronbach's alpha was found to be .92 in this study, showing a good level of internal consistency.

2.3.2 Attachment security

The Experiences in Close Relationships-Revised (ECR-R) (Fraley, Waller, & Brennan, 2000) is a self-report questionnaire that measures adult romantic attachment. The ECR-R contains 36 items, with two 18-item subscales corresponding to attachment related anxiety and avoidance. Respondents are required to indicate how they generally experience relationships, and to rate the degree to which they agree or disagree with the item statements. Ratings are given on a seven point Likert scale ranging from 'disagree strongly' to 'agree strongly'. The scores for each subscale are averaged to provide an attachment related anxiety and avoidance score. The ECR-R has established psychometric properties (Sibley & Liu, 2004; Fairchild & Finney, 2006). Cronbach's alpha for the current study was comparable to those found in

previous studies ($\alpha = .95$ for the avoidance subscale and $\alpha = .97$ for the anxiety subscale).

2.3.3 OC symptoms

The OCI-R is a self-report inventory that is designed to measure the symptoms of OCD (Foa et al., 2002). The OCI-R requires respondents to rate how much each item has distressed or bothered them in the last month. Items consist of statements regarding various symptoms. Ratings are given on a five-point Likert scale ranging from 'not at all' to 'extremely'. The scores for individual items are summed to provide a total score and scores on six subscales corresponding to washing, checking, ordering, hoarding, neutralising and obsessing symptoms. The OCI-R has been shown to have good discriminant validity (Huppert et al., 2007), high internal consistency, adequate test re-test reliability and excellent convergent validity (Foa et al. 2002; Hajcak, Huppert, Simons, & Foa, 2004). Cronbach's alpha values for the subscales and total score were found to be robust in this study, ranging from .89 to .95.

2.3.4 OC beliefs

The Obsessive Beliefs Questionnaire-44 (OBQ-44) is a self-report measure that assesses enduring, predisposing beliefs that may increase risk for OCD (OCCWG, 2003). The OBQ-44 requires respondents to rate their general level of agreement with each item. Items consist of statements that reflect different belief domains, and correspond to three subscales; responsibility/threat (RT), importance/control of thoughts (ICT) and perfectionism/certainty (PC). Ratings are given on a seven-point Likert scale ranging from 'disagree very much' to 'agree very much'. Ratings are summed to give scores for each subscale, and a total score. The OBQ-44 has been shown to have good internal consistency, convergent validity and discriminant

validity (OCCWG, 2005). The OBQ-44 showed a good level of internal consistency in the current study, with Cronbach alpha's of .98 for the total score, .97 for the RT subscale, .94 for the ICT subscale and .96 for the PC subscale.

2.3.5 Depression

The second edition of the Beck Depression Inventory (BDI-II) (Beck et al., 1996) is a self-report measure that assesses current levels of mood and various thoughts and behaviours associated with depression. The BDI-II contains 21 items and respondents are required to indicate their response using a four point scale. Scores for each item are summed to give an overall score for depression. A higher score indicates the presence of greater levels of depressive symptomatology. Beck et al. (1996) found the BDI-II to have high internal consistency, with evidence of good criterion and convergent validity. Comparable results were shown in a college student sample (Osman et al., 1997).

2.3.6 General psychopathology

The SCL-90-R (Derogatis, 1994) is self-report questionnaire designed to assess various psychological symptom patterns. Respondents are required to rate how much each item has distressed or bothered them in the last week. Ratings are given on a five point Likert scale ranging from 'not at all' to 'extremely'. Scores for individual items represent nine primary symptom dimensions. In addition, three global indices can be obtained from the scores and reflect the overall level of symptomatology and psychological distress. The SCL-90-R demonstrates good internal consistency, convergent and discriminant validity (Derogatis, 1994).

2.4 Procedure

Approval for the recruitment of participants for this study was gained from a Local Research Ethics Committee. OCD group participants were recruited from psychological services and community mental health teams within local National Health Service Trusts or from charitable organisations within the voluntary sector. Non-clinical controls were recruited through community organisations. All participants received a questionnaire pack with instructions and were required to send back the questionnaire in a pre-paid envelope. Four of the OCD group participants chose to meet with the researcher to fill out the questionnaire.

3. Results

3.1 Descriptive statistics

Table 1 provides descriptive statistics on various demographic variables for the groups.

-----Table 1 to be placed here-----

Between group comparisons were made using t tests for continuous variables and χ^2 for categorical variables. As can be seen, the OCD group was characterised by significantly more individuals who were unemployed, had lower socio-economic status and less qualifications.

3.2 Independent t tests

Table 2 shows the means and standard deviations for both groups on the dependent variables, results of the t tests and the between group effect sizes (Cohens d).

-----Table 2 to be placed here-----

As can be seen from the table, the OCD group reported significantly higher attachment anxiety and attachment avoidance, higher levels of OC beliefs, on the total score and all of the subscales, and lower SCC. The largest between group effect size was for the total score on the OBQ-44.

3.3 Correlational analyses

To explore the associations among SCC and the other variables, correlational analyses were performed, the results of which are presented in Table 3.

-----Table 3 to be placed here-----

Once the effects of depression were partialled out, only the total OBQ-44 score and the perfectionism/certainty subscale had a significant negative relationship with SCC in the OCD group. Correlational analyses on a subscale level (Table 4) revealed that the obsessing, hoarding, ordering and neutralising subscales had significant negative relationships with SCC whereas the washing and checking subscales did not.

-----Table 4 to be placed here-----

3.4 Path analyses

A path analysis was conducted to examine whether OC beliefs mediated the relationship between attachment and OC symptoms, and the relationship between SCC and OC symptoms (Maruyama, 1998). The path model was tested by conducting two multiple regression analyses in which OC beliefs and OC symptoms were entered as the dependent variables respectively. Table 5 and Figure 1 shows the results.

-----Table 5 to be placed here-----

-----Figure 1 to be placed here-----

There were no significant direct paths from SCC to OC symptoms or attachment anxiety to OC symptoms. Attachment avoidance exhibited no direct or indirect effects on OC symptoms. However, SCC was found to have a significant direct effect on OC beliefs, which in turn had a direct effect on OC symptoms. Similarly, attachment anxiety showed a significant direct effect on OC beliefs, which in turn had a direct effect on OC symptoms. This suggests that OC beliefs mediate the relationship between SCC and OC symptoms, and attachment anxiety and OC symptoms. Together, SCC, attachment anxiety and attachment avoidance explained 37% of the variance in OC beliefs.

As attachment avoidance exhibited no significant effects, a model trimming approach was used in which the reduced model was estimated using a further regression analysis. The results of the trimmed model are presented in Table 5 and Figure 2.

-----Figure 2 to be placed here-----

To calculate the indirect effect of SCC on OC symptoms and attachment anxiety on OC symptoms for this trimmed model, the path coefficients were multiplied. The indirect effect of SCC on OC symptoms ($\beta = -.19$) and attachment anxiety on OC symptoms ($\beta = .13$) were weak compared with the direct effect of OC beliefs on OC symptoms, further supporting the hypothesis that OC beliefs mediate the relationship between attachment anxiety and OC symptoms and between SCC and OC symptoms.

4. Discussion

This study examined the relationship between attachment, SCC and OC beliefs in OCD. The finding that people who experienced OCD exhibited a greater degree of attachment insecurity compared with individuals who did not report mental health difficulties is consistent previous research that has found insecure attachment in people with OCD (Myhr et al., 2004). This finding may also lend some support to the theoretical conjectures of Guidano and Liotti (1983), who suggest that individuals with OCD have experienced a particular early environment which leads to insecure attachment. It must be noted that the assumption of this study was that an individual's current degree of romantic attachment security is likely to reflect, in part, their degree

of early attachment security, in line with the stability/continuity hypothesis of attachment theory (Bowlby, 1977). However, attachment theory also posits that that internal working models can be updated (Bowlby, 1973). Thus, the results of the study must be considered with caution in relation to Guidano and Liotti's (1983) model of OCD. It can be concluded that the findings suggest that people with OCD have more insecure attachments in their current relationships, but this may not necessarily mean that this reflects their early attachment experience.

Consistent with the cognitive appraisal model of OCD (OCCWG, 2003) and previous research (OCCWG, 2005; Bhar, 2004), individuals with OCD had higher levels of OC beliefs generally and on different belief domains. Beliefs relating to perfectionism/certainty were associated with SCC after controlling for depression, not importance/control of thought beliefs as predicted by Clark's (2004) model. Clark (2004) does not elaborate on why an intrusion leads to efforts to eliminate it other than that it represents a contradiction to core values. In light of the current findings, an extension of this model could be that a thought that contradicts valued aspects of the self is not only experienced as alien to an already fragile self-concept, as Clark (2004) argues, but also because it is interpreted by the person as *lacking in control and/or certainty*, for example, of themselves, of events or the future. This is consistent with the view that OCD is characterised by a need for control and perfection (Guidano & Liotti, 1983) and that anxiety in general is characterised by the appraisal of events as out of one's control (Chorpita & Barlow, 1998; Barlow, 2000). This interpretation of the findings remains tentative as the total belief domains score was also associated with SCC when depression was controlled and the path analysis did not investigate the role of each belief domain in influencing OC symptoms.

The OCD group exhibited lower levels of SCC compared with individuals who did not report mental health difficulties. This finding provides support for Guidano and Liotti's (1983) theory that people with OCD have developed a self-concept that is characterised by ambivalence and uncertainty. This is consistent with previous research that has found lower SCC to be associated with high neuroticism, higher levels of anxiety and depression in non-clinical samples (Campbell et al., 1996; Smith, Wethington, & Zhan, 1996), and depression in clinical samples (Bigler, Neimeyer, & Brown, 2001). The findings of the current study are also in accordance with previous research that has investigated self-ambivalence in OCD (Bhar, 2004).

The pattern of results concerning OC belief mediation suggest that a more uncertain self-concept and a greater degree of insecurity in relationships impacts on OC beliefs, which in turn has a direct effect on OC symptoms. This is in line with a previous study that found OC beliefs mediated the relationship between self-ambivalence and OCD (Bhar, 2004). This is also consistent with the idea of an uncertain self-concept predisposing an individual to OCD through the mediating effect of certain dysfunctional beliefs (Guidano & Liotti, 1985) and that insecure attachment leads to maladaptive affect regulation and cognitive processing (Lopez & Brennan, 2000). However, SCC, attachment anxiety and attachment avoidance accounted for only 37% of the variance in OC beliefs, and OC beliefs only accounted for 20% of the variance in OC symptoms, indicating that other factors also impact on OC cognitions and symptoms. For example, Clark (2004) argues that negative affectivity is a key vulnerability factor in OCD, although research investigating whether negative affectivity has a direct effect on OC symptoms has been mixed (Sexton et al., 2003; Norton et al., 2005).

Interestingly, only particular OC symptoms were related to SCC in this study. Specifically, lower SCC was most strongly related to a greater degree of hoarding and neutralising symptoms and more weakly related to obsessing and ordering symptoms, but not related to washing and checking symptoms or the total score. The lack of a relationship between the total score and washing and checking symptoms could be linked to a limited sample size. However, it may also suggest that individual symptom subscales are more useful in assessing OC symptoms rather than total scores, at least with the OCI-R (Foa et al., 2002). It has been noted previously that as individuals typically present with a highly idiosyncratic set of OC symptoms, the total OCI-R score may be suppressed by the items that are not relevant to an individual's symptoms (Abramowitz, Storch, Keeley, & Cordell, in press).

However, it is possible that the findings suggest that certain types of OC symptoms are characterised more by a lack of clarity in self-concept compared with others. For example, hoarding behaviour, which had the strongest negative correlation to self-concept clarity, may emerge as a means of an individual trying to establish a felt sense of security and control that is not experienced both internally and externally. Indeed, research has shown that hoarders consider their possessions to be part of themselves and provide a source of security and comfort (Frost & Hartl, 1996; Steketee, Frost & Kyrios, 2003).

The study had several limitations in design and execution. The sample size was small and thus limits the power of the study. Individuals in the study were predominantly female and white in ethnic origin, and the control group consisted of individuals who were from a higher socio-economic status, had a higher rate of employment and had more qualifications compared with the OCD group, which limits

the generalisability of the findings. In addition, for the majority of the OCD group, psychiatric diagnosis of OCD could not be reliably determined. The study was cross-sectional and therefore no firm conclusions can be reached regarding the causal status of the constructs investigated. A further issue is that levels of anxiety and self-esteem were not measured and therefore not controlled in the analyses. Low self-esteem has been observed in people with OCD (Ehnholt, Salkovskis & Rimes, 1999) thus it is possible that the associations between SCC and OC symptoms could be due to low levels of self-esteem, particularly as SCC has been shown to be positively associated with self-esteem (Campbell et al., 1996). Further methodological limitations include the issue of the sole use of self-report measurement methods. Finally, the differences in self-concept clarity may have been due to a general difficulty in making decisions in the OCD group, which is a feature of OCD (Farrell & Barrett, 2006).

This study has a number of implications for clinical practice. As beliefs were found to have a mediational role, careful assessment of these beliefs may be necessary to gain a comprehensive understanding of an individual's symptoms. Treatment refusal and drop out rates in exposure/response prevention for OCD may be linked to apprehension and fear about the difficulty and intensity of the treatment (Maltby & Tolin, 2003; 2005). It is possible that a chronically unstable, inconsistent and uncertain sense of self is also a factor that contributes to this apprehension and anxiety, particularly if beliefs about the need to be certain and perfect in all situations are also held. Thus a focus on increasing the stability, consistency and certainty of self-beliefs, at least initially, may help to engage individuals in the treatment. In particular, the findings of this study suggests that an intervention of this kind may have an impact on OC-related beliefs, which in turn may reduce symptoms.

This study represents the first empirical investigation of SCC and attachment in OCD, thus further research is needed to examine whether the observed findings can be replicated in studies with larger samples that use diagnostic assessments. Ideally future research would use longitudinal designs to investigate whether these factors predispose individuals to developing OCD. It would be important for future studies to control for self-esteem, difficulties in making decisions and levels of anxiety. In addition, it would be important to explore whether increasing self-concept clarity leads to changes in OC-related beliefs, as suggested by the findings of this study. Finally, further research is needed to advance an understanding of the role that attachment plays in the development and maintenance of OCD. For example, qualitative research could investigate the theoretical conjectures of Guidano and Liotti (1983) that people with OCD have experienced an early attachment environment characterised by ambiguous messages of love and rejection.

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Table 1. Demographic features of the OCD and control groups

	OCD group	Control group	Analysis (t or X ²)
Mean (SD) age (years)	37.8 (12.3)	39.4 (12.8)	0.54
Number females (%)	30 (68.2)	25 (73.5)	0.26
Number Caucasian (%)	41 (93.2)	33 (97.0)	---
Number single (%)	24 (54.5)	10 (29.4)	4.93 ¹
Number employed	18 (43.2)	25 (73.5)	10.96**
Number managerial/professional	23 (53.5)	29 (87.9)	12.43*
Number University educated	15 (34.1)	26 (76.4)	14.26* ¹

* $p < .05$, ** $p < .01$, ¹Fisher's exact test

Table 2. Means (Standard deviations) for each variable in the OCD and control groups

Variable	OCD group (<i>N</i> = 44)	Control group (<i>N</i> = 34)	<i>t</i> -test of the difference ¹ (d.f.)	Effect size
ECR-R Anxiety	4.09 (1.61)	2.09 (0.76)	7.23* (64)	1.59
ECR-R Avoidance	3.57 (1.29)	2.23 (0.80)	5.65* (73)	1.25
SCCS	32.52 (10.22)	46.29 (7.55)	-6.84* (76)	-1.53
OBQ-44 total	204.18 (57.98)	100.00 (24.16)	10.77* (61)	2.35
OBQ-44 RT	79.00 (25.14)	36.97 (11.01)	9.93* (62)	2.16
OBQ-44 PC	80.86 (23.06)	42.56 (13.92)	9.08* (72)	2.01
OBQ-44 ICT	44.32 (19.64)	20.47 (8.22)	7.27* (61)	1.58

¹Bonferroni adjustment was used in light of the increased likelihood of a Type 1 error due to multiple comparisons.

**p* < .01

Table 3. Zero order and partial correlations among the SCCS and ECR-R, OBQ-44 and OCI-R

	Zero order correlations		Partial correlations ¹
	OCD group	Control group	OCD group
ECR-R Anxiety	-.34*	-.60**	-.06
ECR-R avoidance	-.31*	-.32*	-.13
OBQ-44 Total	-.54**	-.30*	-.34*
OBQ-44 RT	-.41**	-.13	-.15
OBQ-44 PC	-.54**	-.38*	-.41**
OBQ-44 ICT	-.43**	-.07	-.22
OCI-R	-.22	-.55**	---

¹Partialling out the total BDI-II score
 $p < .05$ (one tailed), ** $p < .01$ (one tailed)

Table 4. *Zero order correlations among the SCCS and OCI-R subscales for the OCD group*

OCI-R subscale	Zero order correlations
Obsessing	-.28*
Washing	.19
Checking	.22
Hoarding	-.31*
Ordering	-.27*
Neutralising	-.30*

* $p < .05$ (one tailed)

Table 5. *Results of the regression analysis*

First regression analysis: Full model (N = 44)					
Dependent Variable	Predictors	Standardised B	t	p value	R²
OBQ-44 total score	ECR-R anxiety	.30	2.13	.04	.37
	ECR-R avoidance	-.01	-0.86	.93	
	SCCS	-.45	-3.26	.02	
Second regression analysis: Full model (N = 44)					
OCI-R total score	ECR-R anxiety	.18	1.11	.28	.25
	ECR-R avoidance	.12	.79	.44	
	SCCS	.09	.53	.60	
	OBQ-44 total score	.382	.19	.03	
Third regression analysis: Trimmed model (N = 44)					
OCI-R total score	OBQ-44 total score	.44	3.22	.03	.20

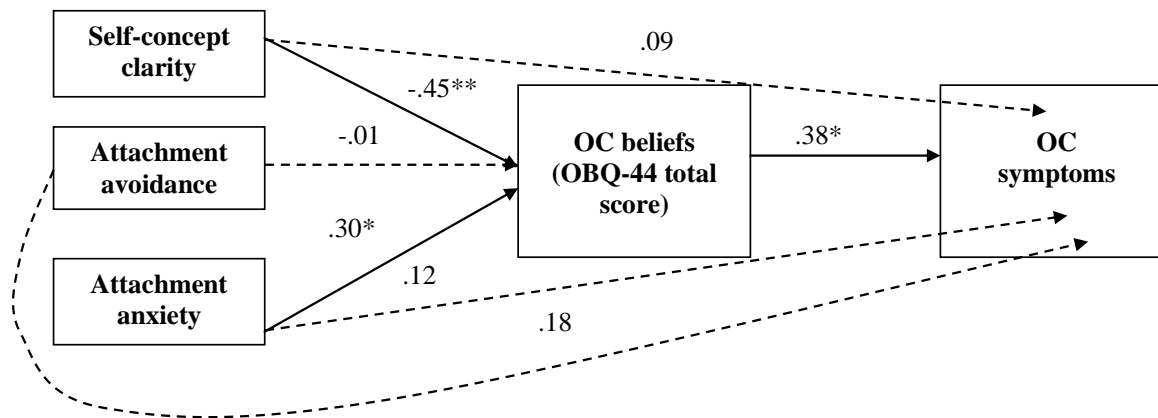


Figure 1. Full path diagram relating self concept clarity, attachment security, OC beliefs and OC symptoms. The figures next to each path represent the standardised regression coefficients (β).

* $p < .05$, ** $p < .01$, dotted lines represent insignificant paths

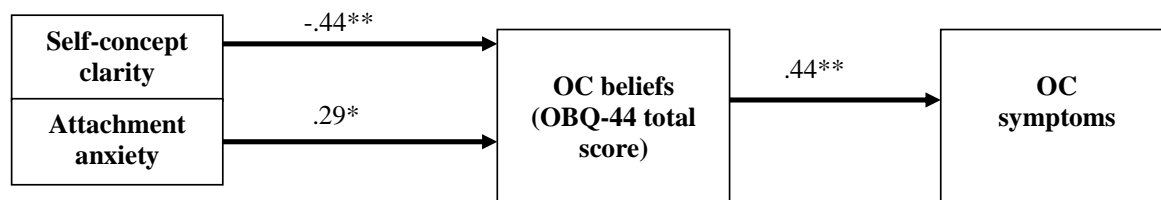


Figure 2. *Trimmed path model relating self concept clarity, attachment anxiety, OC beliefs and OC symptoms*

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

