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Therapist drift in the treatment of anxiety disorders

By:

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Abstract

Therapist drift is the deviation from best practice in the treatment of psychological disorders. This doctoral dissertation extends the literature on therapist drift, adding to the evidence that this pattern of practice applies in the treatment of anxiety disorders. First, a meta-analysis was used to determine which treatments are most efficacious and effective in treating anxiety disorders. The findings showed that cognitive behavioural therapy (CBT) is the most efficacious and effective approach to treating anxiety disorders, and that this effect is greater when that therapy involves exposure. Next, a novel measure was developed to enhance understanding of causes of drift. That measure - the Negative Attitudes towards CBT Scale (NACS) – consisted of a single factor with strong external validity. Next, the extent to which therapist drift occurs was assessed through surveying clinicians and clients about what occurred in treatment. Using an existing approach to classifying the adequacy of therapy, approximately half of clinicians reported failure to deliver adequate versions of evidence-based therapies, whereas nearly 90% of clients reported such failure to deliver adequate therapy. Considering possible causes of drift, clinicians' own levels of anxiety and negative attitudes predicted the underutilization of core components of CBT for anxiety disorder. Clients recognized clinicians who they saw as not drifting as being more competent and professional, and developed greater confidence in their therapist. Finally, self-assessment bias among clinicians was explored. Clinicians reported that they were better than the majority of their peers, and that that higher proportion of their clients recovered than is likely, given existing evidence on such outcomes. The General Discussion summarises these findings and embeds them in the existing empirical and theoretical literature, before making recommendations for clinical work (practice, training and supervision) and for future research.

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Chapter 1: Anxiety, anxiety disorders, treatment and therapist drift

1.1. Introduction

Anxiety disorders are amongst the most prevalent mental health issues in the world (Kadri, Agoub, El Gnaoui, Berrada, & Moussaoui, 2007; Kessler, Aguilar-Gaxiola, Alonso, Chatterji, Lee, Ormel, Üstün, & Wang, 2009; Kessler, Berglund, Demler, Jin, Merikangas, & Walters, 2005; Sartorius, Üstün, Lecrubier, & Wittchen, 1996). Research has shown that the most efficacious psychological treatments for anxiety disorders come from the cognitive behavioural therapy (CBT) paradigm, either with or without psychopharmacology as a supplement (Bradley, Greene, Russ, Dutra, & Westen, 2005; Eddy, Dutra, Bradley, & Westen, 2004; Fedoroff & Taylor, 2001; Hofmann & Smits, 2008; Norton & Price, 2007; Otto, Pollack, & Maki, 2000; Westen & Morrison, 2001; see Appendix A for more information). While recovery rates across anxiety disorders are different across studies, they are all relatively high. For example, CBT treatment for posttraumatic stress disorder has a recovery rate of 67% of those who complete treatment (Bradley et al., 2005). Similarly high improvement rates (58%) have been reported for clients treated with CBT for generalised anxiety disorder (Butler, Chapman, Forman, & Beck, 2006). Across a wider range of disorders, Hansen, Lambert, and Forman (2002) report that over half of patients in such trials achieve recovery, while about two-thirds make clinically meaningful improvement. However, these data apply to efficacy and effectiveness studies rather than everyday clinical practice.

Despite these empirically supported treatments being available to clinicians, recovery and improvement rates are lower in everyday practice. At the end of therapy in such routine settings, the mean rate of recovery is approximately 14%, while a further 21% show clinical improvement – figures that are substantially below those achieved in efficacy and effectiveness trials (Hansen et al., 2002). Approximately 8% show

deterioration and the remaining 57% show no change (Hansen et al., 2002 Similarly, Westbrook and Kirk (2005; 2007) reported that approximately 33% of patients in routine care recovered, a further 15% showed reliable improvement, and 2-3% deteriorated, leaving approximately 48% unchanged. Chilvers et al.'s (2001) study of outcomes for depression showed a good outcome in approximately 30% of cases overall, with a further 30% improving, and 40% failing to improve. Better outcomes were shown by Schindler, Hiller, and Witthöft (2011), who found 48% recovery, 25% improvement, 2% deterioration and 25% remaining unchanged. However, despite the variation in outcomes between naturalistic studies, it is clear that there is a substantial gap in outcomes between more controlled studies and everyday practice. That effect might be due to the lower number of therapy sessions delivered in routine practice (Hansen et al., 2002), different patient profiles, or variations in delivery by the therapist. However, it is also likely that the differences indicate that ESTs are not being conducted as effectively as they could be in non-research settings.

This dissertation will explore rather other potential causes. In particular, this dissertation will examine the role of the clinician in treating anxiety disorders when using CBT. The first step will be to introduce the revenant topics (this chapter), then to establish which part of CBT techniques are important in treating anxiety (Chapter 2). Then this dissertation will explore reported technique use and the potential reasons for techniques to be underutilized in routine care. As it has been well established in the literature that CBT is the most efficacious treatment for anxiety disorders, this dissertation will focus on the use of CBT techniques.

The next sections of this chapter (1.2) will explore what therapist drift is, what it effects it has, what potentially causes therapist drift, and offer some evidence from the literature that therapist drift is occurring. Then, this chapter will detail the relationship between therapist drift and anxiety disorder. Finally, this chapter will detail what will

be measured in the rest of the dissertation.

1.2. Therapist drift

Clinical psychology, in clinical practice, is a soft science relying on human-to-human interactions. CBT relies on trained clinicians providing idiosyncratic interventions based on manuals. And, unlike any other clinical science, there is no validated measure to properly assess if therapy is delivered properly. Nor are there any measures to assess if clients are doing the work required of them. What clinical psychology does well, however, is provide rigorous methodological requirements for interventions to be considered efficacious.

Yet, for the most part, the fallibility of the clinician is ignored in clinical research. Rather researchers and clinicians focus on either the client's failures or shortcomings in the intervention. Largely clinicians and researchers attribute failures in therapy to the client (Stobie, Taylor, Quigley, Ewing, & Salkovskis, 2007). This phenomenon could lead to a culture of client blame. There have not been many attempts to analyse what classifies someone as being treatment resistant. It appears as if, rather than ascertaining why therapy fails or why a particular client does not improve, clinicians label the client as being resistant and move on. This appears to be the case at least with the clients in Stobie et al.'s (2007) study, where even those clients who did not receive an adequate dose of psychotherapy were labelled as '*OCD-refractory'*.

In the case where an efficacious intervention is blamed, this could develop a culture that eschews empirical approaches in favour of clinical expertise. In the treatment of anxiety disorders, there are several common myths around CBT and exposure (e.g., its unethical, dangerous, painful, too disturbing, untested, etc; Olantunji, Deacon, & Abramowitz, 2009). In addition to these myths, clinicians who rely on their clinical expertise often espouse the notion that manuals and empirical approaches are dehumanizing. These clinicians tend to be less competent and over-estimate their own

empathy more so than competent clinicians who rely on empirical methods (Brosan, Reynolds, & Moore, 2008; Elliot, Bohart, Watson, & Greenberg, 2011; Fuertes, Stracuzzi, Bennet, Schienholtz, Mislowack, Hersh, Cheng, 2006). Another argument that is often espoused is that skill and expertise come from years of experience. However, administering any treatment over many years is not likely to increase skills or expertise unless one acknowledges and addresses shortcomings in therapeutic practice. Also, it has been demonstrated by Shapiro and Shapiro (1982) that more experienced clinicians had poorer outcomes than less experienced clinicians. The evidence (e.g., Shapiro & Shapiro, 1982) suggests that clinicians' outcomes decline over time.

To date the most efficacious and effective methods of reducing the pathological effects of anxiety disorder is through CBT with some form of exposure, as demonstrated in by the wider literature (see Appendix A). So why do so many clients remain refractory? A number do not engage with therapy and do not do the work required of them. Another set are simply not offered CBT (Stobie et al., 2007). A final group are given inadequate therapy. Merely labelling oneself as a CBT therapist does not mean that CBT therapy is being provided or that it is being provided correctly.

1.2.1. Key terms

Therapist drift. Therapist drift is a therapy-interfering behaviour where the therapist deviates from therapeutic protocol. This deviation, as defined by Waller (2009), can either occur in the case formulation and intervention selection process or can occur in the application of the therapy. An example of the former is when a service user is not offered CBT where CBT is the most efficacious intervention. An example of the latter is when a therapist provides inadequate therapy by foregoing the use of a key technique (e.g., exposure) required in treatment. Therapist drift is a deviation from best practice or a protocol without any evidence supporting such a deviation; the deviation(s) can be made intentionally or unintentionally.

Therapist drift occurs without any supporting evidence to indicate that a deviation is appropriate. When drift occurs, clinicians often do not have a plan to get therapy back on track. This may mean that therapy is therefore being provided without any clear rationale, and that the clinician is relying on his or her own clinical expertise.

If therapist drift, or drift, is at one of the spectrum, the antithesis of this would be adherence. Drift may be one of the underlying factors in the rift between efficacy and effectiveness. This dissertation will explore the potential difference in efficacy and effectiveness studies (see Chapter 2).

Adherence versus competence. Adhering to a treatment protocol does not equate to competence. Competence goes beyond adherence, as competence involves understanding how and why a protocol works. Competence also involves the ability to use multiple tasks and skills. Therefore, a competent therapist may deviate from a protocol, as they may have evidence for another technique or approach being better. The difference between the two terms can be seen in a study where novice clinicians delivered highly effective treatment (Öst, Karlstedt, & Widén, 2012). In this study, the novice clinicians successfully treated only one type of disorder; eating disorders. While these clinicians may have developed some skills, it would not be fair to expect them to have competence to apply these skills to other disorders (e.g., anxiety disorders).

Efficacy versus effectiveness. Efficacy and effectiveness are both outcome measures. In clinical psychology both terms are measurements of how well an intervention works. However, they are measurements used two different methods and explore the data differently from each other. Efficacy measures how well an intervention performs in a highly controlled study. Efficacy establishes which intervention is best suited to treat a particular disorder. More recently, this has been extended to look at treatments for comorbid disorders. Over time, these studies have become more reflective of real-world conditions. There are various methodological

requirements for a study to be considered efficacious, as discussed above (Chambless & Hollon, 1998; Fromme, 1999).

Effectiveness measures how well an intervention performs in a clinical real-world setting. Effectiveness studies are less controlled than efficacy studies. Data from efficacy studies gives clinicians and researchers a picture of how well an intervention performs with the typical client (Rush, 2009).

In general, effectiveness usually tends to be below efficacy for established efficacious interventions, with regards to the rigorous oversight and supervision employed in efficacy studies. There is some evidence that effectiveness studies show lower levels of change, potentially because of the differences in oversight and supervision (Gibbons, Stirman, DeRubeis, Newman, & Beck, 2013). In this study (Gibbons et al., 2013), therapists delivered the same therapy in a highly controlled setting (i.e., an efficacy study) and in routine care (analogous to an effectiveness study). Gibbons et al. (2013) found that there were better outcomes in the highly controlled setting.

Technical treatment failure. When a treatment is not adequately provided and clients do not improve, this outcome has been referred to as a technical treatment failure (Rachman, 1983). This is when the therapist makes mistakes. Technical treatment failures are potentially caused by therapist drift. Not all technical treatment failures are due to drift (e.g., a clinician attempted to deliver exposure but delivered incorrectly) nor are all cases of therapist drift technical treatment failures (e.g., when a clinician drifts in case formulation, prior to delivery of treatment).

Serious treatment failure. When the correct treatment is provided adequately but clients do not improve or makes limited progress it is termed a serious treatment failure (Rachman, 1983). Serious treatment failures can be due to clients' inability to engage in therapy (e.g., failure to do homework, to do in session exercises). Failures of

this sort can also be due to poor rapport with the client. Another possible reason for failures of this sort is the treatment itself just does not work with a particular client or client group.

1.2.2. Potential causes of drift

The following examples of potential causes of drift was created using Meehl's (1986) and Waller's (2009) work examining why therapists make mistakes. This by no means is a comprehensive list of current causes of drift, but an exploration of the potential causes of drift as discussed in the literature to date.

Sheer ignorance. According to Meehl (1986), one of the contributing factors to psychologists making mistakes is that they are simply unaware. This is evidenced by clinicians believing that exposure is unethical, harmful, intolerable (Deacon, Lickel, Farrell, Kemp, & Hipol, 2013) and has no research supporting it.

Clinicians' cognitions. Clinicians as stated earlier, are human and thus prone to making mistakes (Waller, 2009). Some of these mistakes come from their biases and perceptions, such as self-concept and self-assessment bias. Clinicians' cognitions can be reinforced by client behaviours, for example client self-blame offers clinicians an escape from evaluating their own thoughts and beliefs.

Self-Concept is the image that people hold in their head of themselves. Meehl (1986) says that clinicians try not to damage the image of what they believe they are. This can go as far as for a CBT therapist to ignore the fact they are not meeting minimums requirements to deliver adequate CBT. Or clinicians may ignore the fact clients are not actually getting better because it harms their self-image of being a therapist.

This feeds into self-assessment bias. Self-assessment bias is when clinicians overestimate their abilities in providing care to clients (Walfish, McAlister, O'Donnel, & Lambert, 2012). Self-assessment bias is an effect of self-concept, which blinds

clinicians to their own shortcomings and clients not progressing in therapy. This feeds into drift.

If clinicians recognize the disparity between their self-concept and actual outcomes, they may engage in reducing cognitive dissonance by engaging in self-assessment bias. This is confirmatory bias (Lilienfield, Ritschel, Lynn, Cautin, & Latzman, 2013). This is tendency for clinicians to seek out evidence consistent with their self-concept (Lilienfield, 2012; Lilienfield et al., 2013). Hindsight bias in this case, can lead clinicians only to remember positive case outcomes. Clinicians may also engage in motivated forgetting where clinicians believe it was the client's fault (Pezzo & Pezzo, 2007). Alternatively, as part of motivated forgetting, clinicians can engage in retroactive pessimism, where they, as clinicians, somehow how lacked control in a situation and could not have prevented it (Pezzo et al., 2007).

Clinicians' emotions. Like with all humans, clinicians fear judgment, fear feeling guilty about underperforming and this can affect clinician output (Waller, 2009). Clinicians' emotions can be linked to clinicians' safety behaviours (see below). For example, a clinician who is afraid of pushing a client to face their fears may hold back on exposure to reduce their own distress. Clinicians' emotions may affect clinician decision making in negative ways.

Context-driven behaviours. Many influences can affect clinicians' ability to deliver adequate therapy. These influences can negatively affect a clinicians' behaviours and cause poor outcomes (Waller, 2009). Waller (2009) lists fatigue and stress as being influences that can reduce clinician energy, planning, and flexibility thus reducing overall productivity.

Clinicians' safety behaviours. Clinicians may avoid distressing clients in the moment with exposure, due to their own anxiety and their own depression (Harned, Dimeff, Woodcock, & Contreras, 2013; Waller, 2009; Waller, Stringer, & Meyer,

2012). When a clinician's own anxiety leads to the clinician avoiding using a certain technique, without the therapist having evidence supporting that that technique should not be used, then therapy has not been adequately delivered. Inadequately delivering services by not providing the required services is yet another potential cause of drift.

The threat of technological unemployment. Clinicians do not like to believe that novices, or individuals untrained in psychology can do their jobs, if not better (Meehl, 1986). However, Öst, et al. (2012) have demonstrated that novice clinicians with supervision were able to perform at the same level of experienced clinician. The risk is that experienced clinicians might choose to do more work than is necessary, rather than delegating tasks to technicians or novices who could complete routine work. This routine work might include conducting manualized assessments (e.g., the Weschsler intelligence assessments) or certain treatments. By not using these potential resources, experienced clinicians may overburden themselves. As Waller (2009) points out, this may cause clinicians to become overworked and thus prone to drift.

Dehumanizing flavour. Dehumanizing flavour (Meehl, 1986) is when a clinician avoids using a technique or tool because the clinician feels that the technique or tool is dehumanizing. A common complaint against CBT is that is dehumanizing because it uses manualised approaches. Clinicians who hold this belief are more likely to use clinical judgement in place of protocols (Addis & Krasnow, 2000; Becker Zayfert, & Anderson, 2004), and thus are more likely to deviate from expected practice. That is despite the evidence that clients are more likely to improve or recover with interventions using manuals as compared to treatments based on personal opinions.

Mistaken conceptions of ethics. Meehl (1986) defines the mistaken conception of ethics as doing something because the clinician feels it is nicer or feels better, despite the lack of results. In the terms of treating anxiety, this would be avoiding having the client go difficult work such as exposure, because exposure is not easy, does not feel

‘*nice*’ and can be distressing in the moment (Meehl, 1986). Clinicians avoid exposure despite the fact that it actually has an effect on reducing anxiety.

1.2.3. Outcomes of drift

The effects of therapist drift are cyclical. Unaware of problems, clinicians engage in activities that enable drift to continue. Affecting both client and clinician a like, clinician drift creates problems that ripple out to affect more than one session, more than one client, and more than one therapist.

Effects on the client. As the impact of drift has not been studied fully, the following are potential effects on the client. The most obvious potential effect of therapist drift on the client is that the client does not get better. A client's symptoms remain or in some cases are made worse by drift. This can lead to client self-blame for treatment failure. Self-blame can potentially exacerbate symptoms such as meta-anxiety (i.e., anxiety over anxiety). Clients can also be left with a fear of therapy and CBT. Clients who experience technical treatment failures, who are unaware of the inadequate delivery, may believe CBT does not work. Clinicians then have to do additional work to help these clients to accept CBT. That is assuming the client comes into therapy and does not develop maladaptive thoughts about being incurable.

Effects on the clinician. Therapists who engage in drift may be unaware of their deviations. Being unaware of drift however is one of the issues that lead to more drift. Being unaware of drift, clinicians may not seek help or properly consult or receive supervision to have their problem behaviours addressed. Therefore, clinicians likewise may not improve their skills. Inadequately delivering a therapy for years does not improve competency. Because clinicians are unaware of their shortcomings, they may not seek supervision to address these shortcomings, or additional training, skills may not improve, and clinicians continue to drift. Clients might suffer due to this and the system may be burdened further.

Financial costs of drift. In 2007, roughly 2.28 million people in England suffered from an anxiety disorder. An estimated £1.24 billion went into services for these individuals, another £7.7 billion in lost earnings (McCrone, Dhanasiri, Patel, Knapp, Lawton-Smith, 2008). This comes roughly to £3903.51 per person, per year. Given the average prevalence rates by 2026, 2.56 million people in England will have an anxiety disorder of some form. Accounting for inflation, it is estimated that services by 2026 will spend £2.04 billion treating these anxiety disorders and another £12.15 billion in lost earnings per year (McCrone et al. 2008). If everyone in England covered the cost and losses, then each would pay £5542.97 per year. By not addressing drift, this means there may be more people in the system and that more money is spent on each person, potentially adding further burden to the NHS services and budget. Therefore, every attempt should be made to ensure that people with anxiety disorders are treated efficiently and effectively.

1.2.4. Examples of drift in the literature

According to Hansen, Lambert, and Forman (2002) the mean rate of recovery is 14%, with 21% showing some improvement, 8% of clients deteriorating and the remaining 57% showing no change. These numbers show that efficacious interventions are not having the same results in the real world as they are in efficacy studies. A potential cause for this gulf is therapist drift. There is a small but growing body of literature on technical treatment failures and other forms of drift.

In a study of 57 OCD patients only 43% reported receiving either behaviour therapy or CBT and 31% reported not knowing what type of therapy they received (Stobie et al. 2007). The other patients in this study received some other less efficacious therapy. Of those who received CBT, 60% of the cases did not meet minimal criteria to be considered adequate delivery of CBT. Of those a majority, did not even receive any exposure. This means that only 40% of the time was the correct

treatment offered and only 40% of that was adequately done. This is a potential example of two forms of drift: incorrect treatment selection and inadequate delivery of services.

1.3. Anxiety disorders and therapist drift

1.3.1. The CBT approach to anxiety disorders

Like in all forms of therapy, in CBT it is important that boundaries are set, clients understand why the therapy is being used, agendas are set, and homework is done. These are core components of CBT. CBT for anxiety disorders uses both behavioural and cognitive models to help clients reduce their anxieties. This change is achieved through the use of homework and in-session behaviours such as rapport building, psychoeducation, cognitive restructuring, behavioural experiments, and exposure.

Given the nature of the treatments for anxiety disorders, it is important to consider how a client is going to respond to being asked to face what he or she fears. For this reason, it is important that the therapeutic alliance, developed through rapport building, is built and maintained (Creed & Kendall, 2005; Kendall et al. 2009; McLaughlin, Keller, Feeny, Youngstromg, & Zoellner, 2014; Meyerbroker & Emmelkamp, 2008). Any ruptures to that alliance should be swiftly addressed before therapy continues (McLaughlin et al., 2014).

Part of having a client '*buy into*' therapy comes from the clinician's rapport with the client (Creed & Kendall, 2005; Kendall et al. 2009). Another part comes from psychoeducation. Psychoeducation is the transfer of knowledge regarding the disorder, the symptoms, the treatment options, and the selected treatment (Eftekhari, Stines, & Zoellner, 2006; Foa, Gillihan, & Bryant, 2013). Clients should take an active role in understanding and participating in psychoeducation (Chu & Kendall, 2004; Hudson et al., 2014). Concerning treating anxiety disorders, it is important (as it can reduce

dropout) for clients to completely understand why they must face their fears and what the benefit of doing so is. To do so a client should be made aware of the short-term costs of therapy (i.e., increased stress and anxiety) versus the long-term gains (i.e., normal functioning, reduction of anxiety, etc.).

CBT, as evident in the name, comes from the fusion of two paradigms; cognitive therapy and behavioural therapy. In terms of the former, often CBT interventions for anxiety disorders call for cognitive restructuring. Cognitive restructuring is a therapeutic tool in which, through guided discovery, a client takes a maladaptive thought (i.e., filtering, magnification, over-generalisation, magical thinking, and splitting) and finds a more adaptive or rational explanation. As a client develops this skill with time and practice, the disruptive automatic thoughts will be replaced by more adaptive and beneficial thoughts. Take for example, someone with a specific phobia of dogs. This person now thinks that all dogs are dangerous (over-generalisation) and may have such automatic thoughts that when he sees a domesticated dog he goes, '*I'm in danger, this dog is going to attack me'*. A therapist can challenge this cognitive distortion by asking for what evidence the domesticated dog is a threat. These questions through practice can become internalized to the point where the individual no longer over-generalises the threat to non-wild dogs.

The other part of CBT is behavioural therapy. Often this is where exposure based techniques come in with the treatment of anxiety disorders. Often this occurs in the form of behavioural experiments. This appears as one of the most powerful tools in CBT, as it allows clients to test their beliefs, as well as test the information and techniques learned in session. This technique is applied both in session and between sessions, as part of homework. This technique is used when it is safe to do so. Clients should never be asked to place themselves in genuine harm. Behavioural experiments should assess client's belief (e.g., all dogs are dangerous), should have a prediction (e.g.,

if a dog sees me, it will attack me), and finally should have an experiment to test the belief and prediction (e.g., walk past a house with a domesticated dog in the front yard). The experiments should be developed in response to the client's personal hierarchy of fears, often established through a subjective unit of distress scale (SUDS) rating. Early behavioural experiments should begin around a SUDS of 30-40 (out of 100) as it is not too challenging or intimidating nor too easy. This will help a client see early success in reducing fear and build into the therapeutic alliance and the client's allegiance to treatment.

1.3.2. Exposure as a core theme

Exposure is the process of introducing a client to a feared stimulus. This can be achieved through multiple means such as *in vivo*, imaginal, virtual reality, or a combination of any of these approaches. *In vivo* exposure is when the client physically is exposed to the feared stimulus (e.g., a client with a phobia of dogs, approaches a dog). Imaginal exposure is when the client imagines an interaction with the feared stimulus, in cases were a trauma occurred this often is the traumatic incident itself (e.g., when the client was attacked by the wild dog). Virtual reality exposure is where exposure occurs through graphic computer programs that simulate an interaction with the feared stimulus (e.g., a client may see themselves in a dog park). These three types of exposure have other various forms depending on the intervention used and the type of anxiety.

In vivo may occur as flooding or systematic desensitization. Flooding is intensive therapy that often is done in one session goes through a client's entire hierarchy of fear. For simple phobias, this approach is often the most efficacious (Öst, 1989; Zlomke & Davis, 2008). In fact, flooding, while extremely anxiety producing for both client and therapist, tends to generalize better and tends to be more efficacious. However, reviews of exposure have indicated that clinicians are not using flooding

techniques when it is applicable (Koch, Gloster, & Waller, 2007). Also, due to client 'buy in' often systematic desensitization, which is more appealing, is employed. Systematic desensitization is an efficacious intervention, and more suited for complex anxiety disorders. It involves working gradually up the client's hierarchy of fear.

Imaginal exposure is often used in interventions such as EMDR, narrative exposure therapy, or prolonged exposure. Often this is used when the feared stimulus cannot be recreated or would be dangerous to do so (i.e., animal attack, assault, car crash, war, witness to violence). Imaginal exposure requires the client to relive the experience (either parts of it or its entirety) in session. Clients are instructed speak as if it is happening in the present and throughout the experience their SUDS ratings are taken. Part of homework would be to listen to a recording of the session or to read the narrative. Often *in vivo* is added into therapy to address other aspects of the anxiety disorder. If the client had been attacked by a dog and developed post-traumatic stress disorder (PTSD), then during the therapeutic session imaginal exposure would be used to relive the attack but *in vivo* exposure to domesticated dogs would be employed as well.

Virtual reality exposure is an extension of imaginal exposure and of *in vivo* exposure. Recent literature has focused on the use of virtual reality to expose clients to dangerous stimulus (mostly war). It has been used to address traumatic events such as car crashes. It also has been used to address simple phobias such as flying and elevators, where the client (or therapist) was too anxious to use *in vivo* techniques (Botella, Serrano, Baños, & Garcia-Palacios, 2015; Garcia-Palacios, Botella, Hoffman, & Fabregat, 2007).

While research indicates exposure therapy as part of CBT for anxiety disorders works, the mechanism which enables this change is still debated. Until recently, it was widely believed that exposure worked through habituation. A client became use to the

feeling of anxiety until it was reduced to minimal amounts. However, recently the idea of 'new learning' or inhibitory learning has been posited. This comes from learning theory, where the connections between the feared stimulus and fear response are broken and new associations between the stimulus and less anxiety producing responses are established or the links only exist within certain contexts (Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014).

Regardless of the mechanism or the technique used, exposure as part of a CBT approach is by and large the most efficacious tool to reduce the symptoms of anxiety. However, despite having these tools clients sometimes leave therapy still experiencing symptoms of their disorder. Research on this issue often looks at therapy interfering behaviours of the client or shortcomings of therapy itself. Is it possible, as Koche et al. (2007) suggested that the issue is also rooted in therapist?

1.3.3. Clinicians' characteristics

Stobie et al. (2007) illustrated that CBT may not be being delivered at optimal levels. Meehl (1986), Koche et al. (2007), and Waller (2009) suggested potential causes for clinicians not to perform at optimal levels. In addition to these papers, some studies have begun to look at what potentially causes clinicians to perform at suboptimal levels. This research has focused on clinicians' attitudes and anxieties.

Clinician attitudes. There are many negative, and incorrect, attitudes and beliefs about exposure therapy that clinicians believe to be true, such as that clients find exposure too stressful and prefer other approaches despite clients saying otherwise (Olatunji, Deacon, & Abramowitz, 2009). Olatunji et al. (2009) lists many false beliefs that clinicians hold about exposure therapy, such as: it increases attrition rates; that it exacerbates symptoms; clients prefer other approaches; and that the clinician may be sued or have a complaint filed against them. Olatunji et al. (2009) detail the research

that evidences that these beliefs simply do not hold true. Additionally, they also suggest that these negative attitudes decrease the use of exposure when it is appropriate to use.

Becker et al. (2004) surveyed psychologists and trauma specialists treating PTSD, only 17% of the surveyed reported using exposure. However, approximately half of the sample was familiar with exposure for PTSD. Of those who were aware of exposure for PTSD, and who had received training in it, again approximately half of this subsample used exposure in general, and only a third used exposure with PTSD. In addition to this, and perhaps further evidence of therapist drift, clinicians who purportedly supported and intended to use exposure techniques, did not. Becker et al. (2004) suggest this may be due to a lack of knowledge or experience that causes clinicians to continue to hold attitudes that lead to underutilization.

The issue is evidence even in organizations that want to use exposure and CBT based approaches in the treatment of PTSD. The United States Veterans Affairs wanted EST used (i.e., prolonged exposure or cognitive processing therapy [CPT]). Finley et al. (2015) found that clinicians delivered support care twice as often as they delivered prolonged exposure and three times as often as they delivered CPT. Despite the evidence supporting these therapies, clinicians held negative attitudes towards them. As a result of this negative attitude, clinicians believed the therapies to be less effective than they actually are, according to the wider literature. In addition to those negative attitudes, Finley et al. (2015), Cook, Dinnen, Thompson, Simiola, and Schnurr (2014), and Olatunji et al. (2009) suggest that this also might have to do with attitudes that the clinician holds towards the client.

Deacon et al. (2013) measured clinicians' attitudes towards exposure and validated the Therapist Beliefs about Exposure Scale (TBES). Deacon et al. (2013) showed further support for the association between attitudes and use of exposure techniques. Clinicians who held more negative views of exposure, regardless of which

model of practice they came from, were less likely to use exposure techniques. Similarly, Addis, and Krasnow (2000) found the same association between attitudes towards treatment manuals and the use of those manuals. Addis & Krasnow (2000) reported that clinicians sometimes believed manuals to be humanizing. Similar to Becker et al. (2004), Addis and Krasnow (2000) found that only a small proportion of their sample were familiar with manuals, or had even read one, despite already holding negative attitudes towards these manuals.

Clinician anxiety Koche et al. (2007) and Waller (2009) suggested that clinicians' own anxiety may influence which techniques they employ. This idea is supported by research from Levita, Salas Duhne, Girling, and Waller (2016), Meyer, Farrell, Kemp, Blakey, and Deacon (2014), Turner, Tatham, Lant, Mountford, and Waller (2014), and Waller, Stringer, and Meyer (2012). This research represents CBT use across various disorders. For example, Waller et al. (2012) found that clinician anxiety predicted the underutilization key techniques (i.e., food diaries and structured eating) and techniques that have some support (i.e., behavioural experiments) when treating eating disorders. A technique used across both eating disorders and anxiety disorders is exposure. Turner et al. (2014) found that higher levels of prospective anxiety (defined below) showed more worry about using exposure techniques in clinicians treating eating disorders, which could explain the underutilization of the technique. In an experimental design, where anxiety was measured by self-report and through physiological measures, Levita et al. (2016) evidenced that anxiety is predictive of the underutilization of behavioural techniques, in particular exposure techniques.

1.4. Measuring causes of drift

Given the support for CBT in the treatment of anxiety disorders, this dissertation will focus on CBT based interventions in the treatment of anxiety disorders. Given that the previous research (see above) evidences that clinicians' attitudes and anxiety

playing effect their use of evidence-based techniques (including techniques key in treating anxiety, such as exposure), this dissertation will look at clinicians' attitudes and anxiety in the delivery of CBT for anxiety disorders. In addition to this, as some clinicians suggest that certain client factors play a role in the effectiveness of certain techniques (Finley et al., 2015; Cook et al., 2014; Olatunji et al., 2009), this dissertation will explore the associations between some of client factors and what techniques clinicians use.

1.4.1. Measuring attitudes

There are measures that exist that examine clinicians' attitudes towards manuals or specific techniques attitudes (e.g., Addis & Krasnow, 2000; Deacon et al., 2013). Currently, however, there are no measures that look at global attitudes towards CBT. This dissertation will endeavour to develop and validate a new global measure of attitudes towards CBT (see Chapter 4).

1.4.2. Measuring anxiety

There are numerous ways to measure clinician anxiety. As anxiety is multi-faceted experience, this dissertation will use a measure that explores both prospective and inhibitory anxiety; the intolerance of uncertainty scale (Carleton et al., 2007). This measure has been used in previous research that examined clinicians' use of skills (Levita et al., 2016; Turner et al., 2014). Additionally, British and American clinicians may be less familiar with this measure. The measure was originally developed in French (Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994) before being translated to English in 2002 by Buhr and Dugas and subsequently shortened by Carleton et al. (20007). Therefore, this measure has not been in use as long as other more well-known measures (e.g., Beck anxiety inventory, or the state-trait anxiety inventory), especially amongst English-only-speaking clinicians. This lack of

familiarity, may also reduce answers based upon social desirability, as clinicians may be unfamiliar with what this measure is assessing.

While the measure assesses two aspects of anxiety – prospective and inhibitory anxiety – the measure is based upon cognitive models of anxiety. This section will explain what intolerance of uncertainty is and why anxiety influences behavioural output.

Vulnerability and uncertainty. Cognitive models of anxiety suggest that certain individuals are predisposed towards having fearful or anxious responses (Clark & Beck, 2011; Hawke & Provencher, 2011). Individuals with negative cognitive schemas (vague, pre-verbal dimensions of belief, e.g., 'mistrust') and negative core beliefs (operationalized and verbalised beliefs, e.g., 'I can't trust dogs not to bite me'), the underpinnings of cognitive vulnerability-stress theory, are at a greater risk of developing anxiety disorders (Hawke & Provencher, 2011). These schemas involve assumptions about helplessness and danger. Among anxious individuals, assumptions include beliefs that broader ranges of neutral stimuli are dangerous.

Everyone encounters ambiguous or unclear stimuli or problems. The tolerance of uncertainty principle relates to the perception of ambiguous or unclear stimuli (Dugas, Freeston, & Ladouceur, 1997; Ladouceur, Gosselin, & Dugas, 2000). People with a tolerance (usually nonclinical populations) of uncertainty will be less likely to perceive ambiguous stimuli as threatening whereas those with intolerance (usually clinical populations) of uncertainty would see the same stimuli as dangerous. In clients suffering from a clinical anxiety disorder, more so than a non-clinical population, uncertainty causes an elevation in hypervigilance when presented with ambiguous stimuli (Butler & Mathews, 1983; Krohne, 1989; Ladouceur, Gosselin, & Dugas, 2000). Intolerance of uncertainty does not only include external stimuli. The sensitivity towards ambiguous stimuli includes sensitivity towards emotions. This sensitivity is

called intolerance of emotion. If a person cannot tolerate what he or she is feeling, that person may avoid situations where the emotion is evoked. Emotions in anxiety tend to relate to how much attention a person gives the automatic arousal symptoms discussed above (Deffenbacher & Hazaleus, 1985).

Prospective anxiety. Prospective anxiety deals with the desire for predictability and knowing what will happen in the future. Those with a low tolerance of uncertainty will experience greater anxiety when the outcome of a decision is unclear.

Inhibitory anxiety. Inhibitory anxiety deals with a person's inaction when they are faced with uncertainty/ambiguity. People with greater inhibitory anxiety may display freezing behaviours or may be unable to make decisions when the situation is not clear.

Anxiety and task performance. Anxiety affects skill and task performance. People suffering from anxiety may perform at suboptimal levels or below what is expected for that person (Derakshan & Eysenck, 2009). The decrease in performance that anxious people experience could be due to distraction, avoidance, or inhibition (Derakshan & Eysenck, 2009; Eysenck & Calvo, 1992). In this case, a clinician may avoid using certain approaches, such as exposure, as they are unsure how the client will respond or are uncertain (due to sheer ignorance, as suggested by Meehl [1986]) what the typical outcomes from exposure are. Alternatively, a clinician may not remember what the exact wording from a manual was, freeze in the moment, and fail to deliver therapy at optimal levels, or choose to escape their anxiety by using another technique.

These behaviours can be seen as avoidance and escape, respectively. While avoidance is an anticipatory response, escape is a consequence of anxiety (Salkovskis, 1991). Like avoidance, escape behaviour positively reinforces anxiety behaviours. Positively reinforcing anxiety behaviours when a person has an anxiety disorder prolongs the symptoms of the disorder (Salkovskis, 1991). A clinician engaging in

either avoidance or escape maintaining behaviours, not only can harm the client (by not delivering therapy at optimal levels) but can reinforce their behaviours that lead to drift.

1.4.3. Client factors

As discussed earlier in this chapter, some clinicians believe (without evidence) that certain therapies or certain techniques only work with certain clients. In many cases these claims are fairly generalized and lack support (also detailed above). However, it is entirely possible that these beliefs lead clinicians to behave differently with different clients based on various demographics. However, instead of asking clinicians about this (although this is done in the development of the scale in Chapter 4), this dissertation will ask clients various questions and see if any of those variables moderates what techniques were used (Chapter 5).

1.5. Future direction

The overall aims of this doctoral dissertation are: to determine what aspect of CBT moderate treatment outcomes; second, to develop a means of measuring clinicians' attitudes towards CBT; third, to determine the extent of therapist drift; and, finally, to determine potential causes of drift. Therefore, next, aims one and two will be addressed by a meta-analysis, which will examine what potentially may moderate treatment outcome. Then the empirical work will address the potential causes that might contribute to the gap between studies and real-world practice.

Chapter 2: The role of exposure in treatment of anxiety disorders: A meta-analysis

2.1. Introduction

Anxiety disorders are amongst the most prevalent mental health issues in the world (Kadri, Agoub, El Gnaoui, Berrada, & Moussaoui, 2007; Kessler, Aguilar-Gaxiola, Alonso, Chatterji, Lee, Ormel, Üstün, & Wang, 2009; Kessler, Berglund, Demler, Jin, Merikangas, & Walters, 2005; Sartorius, Üstün, Lecrubier, & Wittchen, 1996). It is well established cognitive behavioural therapy (CBT) is the most efficacious treatment option for anxiety disorders (Bradley, Greene, Russ, Dutra, & Westen, 2005; Eddy, Dutra, Bradley, & Westen, 2004; Fedoroff & Taylor, 2001; Hofmann & Smits, 2008; Norton & Price, 2007; Otto, Pollack, & Maki 2000; Westen & Morrison, 2001). For example, in efficacy studies, Bradley et al. (2005) report a recovery rate of 67% for patients with post-traumatic stress disorder (PTSD) who complete treatment, while Butler, Chapman, Forman, and Beck (2006) report 58% of clients showing clinically significant improvement after completing treatment for generalized anxiety disorder (GAD).

Exposure techniques are amongst the most powerful techniques for treating anxiety disorders from the CBT paradigm (Barlow, 2002; Minekla & Thomas, 1999). For example, interoceptive exposure is the most efficacious method for reducing distress from panic attacks (Craske & Barlow, 2007), and Öst (1989) has shown that one-session exposure is efficacious in the treatment of specific/simple phobias. Prolonged exposure and eye-movement desensitization reprocessing (EMDR) both use imaginal exposure, and are considered to be the most efficacious treatments for PTSD (Foa, Dancu, Hembree, Jaycox, Meadows, & Street, 1999; Foa, Hembree, Cahill, Rauch, Riggs, Feeny, & Yadin, 2005; Ironson, Freund, Strauss, & Williams, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Resick, Nishith, Weaver, Astin, &

Feuer, 2002; See '*PTSD*' in appendix A).

The findings derived from efficacy studies are not always matched by results in the everyday practice. In such settings, a large proportion clients do not improve, but rather show no change after therapy (Chiver et al., 2001; Hansen, Lambert, & Forman, 2002; Schindler, Hiller, and Witthöft, 2011; Westbrook & Kirk, 2005; 2007). It is not clear whether these lower levels of everyday practice outcomes are a product of the different setting, or of failure to use the evidence-based treatment appropriately. It is crucial to consider whether therapies for anxiety disorders can have the same impact in real-life settings if the therapy is conducted appropriately. Therefore, the key comparison is between highly controlled efficacy studies and real-world effectiveness studies, rather than comparing efficacy studies with routine practice.

A potential cause of the difference between efficacy studies and real-world effectiveness studies might be the underutilization of exposure techniques. One of the most often cited reasons that exposure is not used is clinicians assume that it will not work in real-world clinical settings (Becker, Zayfert, & Anderson, 2004; Feeney, Hembree, & Zoellner, 2003; Olatunji, Deacon, & Abramowitz, 2009). However, other researchers (Feeney et al., 2003; Koch, Gloster, & Waller, 2007; Levita, Salas Duhne, Girling, & Waller, 2016) have posited that exposure might be underutilized due to the therapists' own levels of anxiety about causing distress to the patient.

While efficacy studies in the form of randomized controlled trials (RCTs) have traditionally been used to set the standard for clinicians to achieve, effectiveness studies have been viewed as being a more accurate representation of what is achievable in 'real-world' settings (Rush, 2009). Therefore, this meta-analysis will examine both efficacy and effectiveness studies to compare the impact of the relevant therapies on anxiety disorders. However, it is important to note that effectiveness studies are not truly analogous to actuarial data from routine practice. Effectiveness studies are only a closer

representation of routine practice as compared to RCTs.

Another criticism of RCTs was that they typically have used completer analyses (CA) only and had not used intent-to-treat analyses (ITT). The issue is that CA is not reflective of the real-world, whereas ITT analyses are more reflective of the real-world and less biased (Gupta, 2011; Hollis & Campbell, 1999; Schell, McBridge, Gennings, & Koch, 2001). In many recent RCTs, both CA and ITT analyses are provided. Therefore, in addition to considering efficacy (in RCT studies) versus effectiveness, this meta-analysis also will compare CA and ITT analyses. Finally, while it is important to make direct comparison between efficacy and effectiveness studies, it is equally important to consider whether the findings of each are affected by potential moderator factors (e.g., diagnosis; type of therapy; the presence or absence of key therapy elements; therapeutic alliance).

This study aims to replicate previous literature (that addressed the efficacy and effectiveness of treatments for anxiety disorders), by determining the overall efficacy and effectiveness of psychological interventions for anxiety disorders, focusing on CBT based interventions. The second aim is to extend the previous literature by determining what variables moderate treatment outcome. If a particular component, for example exposure techniques, positively affects outcomes then when considering therapist drift, it is important to make sure these techniques are employed. For each of these aims, the impact of both study type (efficacy and effectiveness) and analysis type (CA and ITT) will be assessed. The third aim of this study is to update the list of empirically supported treatments (ESTs) using Chambless and Hollon's (1998) criteria.

These aims will inform the next steps of this dissertation. As CBT is fairly well established as the most efficacious therapy for a range of anxiety disorders, this review will detail evidence that this dissertation should focus on CBT interventions. The second and third aim will inform about which techniques, manuals, and other

moderators should be considered in later chapters. For example, if all manuals recommend one technique (or this one technique is a moderator), then the use of that technique should be measured (e.g., frequency of use across a dose of therapy).

2.2. Methods

2.2.1. Selection criteria

Inclusion criteria differed according to whether the study came from a controlled laboratory setting (i.e., efficacy studies) or from an uncontrolled clinical setting/real-world setting (i.e., effectiveness studies). The differences in inclusion criteria were kept as minimal as possible to ensure comparability across both study types. All studies were in English and published between 2011 and 2014. These dates were used for convenience given the size of the literature. The end (14 February 2014) was selected as it was the date on which the identification phase started. To the knowledge of the author of this dissertation, no other studies have previously explored moderators in the treatment of anxiety disorders like this one has. Therefore, the start date was selected to ensure an adequate sample size (e.g., enough studies with ITT analyses), which would provide meaningful results.

The inclusion criteria were as follows: (a) a treatment study of a clearly specified and diagnosed anxiety disorder; (b) use of a treatment manual or set protocol (for efficacy studies, this only applied to the experimental conditions); (c) that the treatment employed at least psychological intervention (pharmacological only studies were excluded whereas studies using both psychology and pharmacological approaches were included); (d) in a series of single-case studies, a sample size of 10 or greater was required; (e) there was a standardized measure of anxiety symptoms at pre-test and post-test; (f) the study included the data necessary to calculate effect size (i.e., mean and standard deviation); and (g) in efficacy studies, the experimental condition had to either be compared to a wait-list control, treatment as usual (TAU) control, minimal/no

contract control, healthy control, a control with the active treatment component missing, or another empirically supported treatment. Any studies not fulfilling these requirements were not included in analysis.

These criteria were used to help find a larger heterogeneous sample. By having a larger sample, it is more likely that the sample is heterogenous and that moderation analyses would be possible. While the samples may be heterogenous (e.g., inpatient and outpatient, different disorders), there is overlap in protocols used to treat many of these various groups. Despite the attempt to get a richer sample to work with, there were not enough data to analyse all the moderators of interest.

Exclusion criteria. Studies without standardized measures were not included, as standardized measures allow for a more accurate and reliable way to compare included groups than other methods (e.g., clinical judgement; Dawes, Faust, & Meehl, 1989). Any articles without English translation were also excluded. If the article was only available behind a paywall, the article was not included (see eligibility below). Any study not including psychotherapy (e.g., pharmacotherapy only) was not included. Finally, any studies where the type of psychotherapy was left undefined were not included.

If two related studies used the same dataset (e.g., a follow-up study that included the original dataset or an extension on the original study), the more recent of the two datasets were used. In this case, no articles met this criterion. A few studies were follow-up studies but the original studies were from prior to 2011. If the datasets were the same but the focus of the article was different (outcome of services versus cost of services), only the article originally coded into the study was included (n = 2).

Missing data or errors related to essential data (i.e., mean, *SD,* N) resulted in that study/condition not being coded. If an error was identified in the data in the original paper (e.g., number of participants was greater at the end of the study than at the start),

the data were not included.

In cases where multiple clinical populations (e.g., PTSD and OCD) were analysed separately, the data were coded separately. However, in cases where multiple clinical populations were analysed as one group (i.e., all participants with an anxiety disorder collapsed into a single group), the data were not included. Despite this meta-analysis considering a variety of anxiety disorders, the authors attempted to keep homogenous groupings (i.e., one disorder, one outcome). In cases were comorbid diagnoses were required by the study for inclusion, the comorbid disorder was noted (see summary of study characteristics below).

Finally, if there was an issue with the reporting of non-essential data (i.e., sample size not reported at follow-up; measure at follow-up changed, and not used elsewhere in the study; statistics clearly inaccurate), these data were not used but any useable non-essential data were included.

2.2.2. Moderator analyses

One of the primary moderators of interest was the difference between the two study types (i.e., efficacy and effectiveness). Efficacy and effectiveness studies were further divided into two more groups based on the analysis type used (i.e., CA or ITT). There were five other moderators of interest: the use of exposure; the anxiety disorder treated; length of treatment; therapeutic alliance; and the year of publication. Where possible, these moderators were examined together (e.g., efficacy studies for PTSD with exposure using ITT analysis versus efficacy studies for PTSD without exposure using ITT).

2.2.3. Search strategies

Initial search. Figure 2.1 shows the process of identification and selection of articles. Medline, via OVID, was searched for articles published between February 14, 2014 (day of initial search) and January 1, 2011. The search terms (see Table 2.1) were

divided into three categories: disorder terms, therapy terms, and result terms. Due to the difference between American English and British English, wildcards were not always feasible. Therefore, to account for the differences in spelling, multiple spellings were used were appropriate. Within each category (e.g., disorder terms), 'OR' was placed between search term (e.g., 'anxiety OR anxiety disorder OR generalized anxiety disorder'). Between each category, 'AND' was placed. This was to ensure that the results had at least one keyword from each category.

Screening. The initial screening reviewed the title and abstracts of all articles returned by the initial search. Any study that appeared to be relevant and/or met inclusion criteria was included for the next step. Any article excluded (n = 7276) at this point was due to the subject of the paper either not relating the topic, the paper being a proposed study protocol, or meeting exclusion criteria based on information provided in the abstract. Many of these studies (exact amount not recorded) related to medical only treatments for anxiety disorders, medical issues (e.g., COPD), anxiety around sexual health related to a medical issue (e.g., pelvic floor collapse and vaginismus) or anxiety around medical procedures (e.g., oral surgery). Considering the types of articles excluded and the publication bias analyses (see below), it is unlikely that these articles would have influenced the results of this study.

Table 2.1. Search terms

	Category 1: Disorders terms	**Category 2: Therapy terms**	**Category 3: Result terms**
Keywords	Anxiety, anxiety disorders, generalized anxiety disorder, generalised anxiety disorder, GAD, post-traumatic stress disorder, post traumatic	Therapy, therapies, treatment, treatments, cognitive behavior therapy, cognitive	Results, outcome, efficacy, effectiveness, benefit, and impact.

stress disorder,	behaviour therapy,

Category 1: Disorders terms	Category 2: Therapy terms	Category 3: Result terms
posttraumatic stress disorder, PTSD, simple phobia, phobias, social phobias, phobia, obsessive-compulsive personality disorder, obsessive compulsive personality disorder, OCD, panic disorders, separation anxiety, and situational anxiety	CBT, behavior therapy, behaviour therapy, behavioral therapy, behavioural therapy, behavioural therapy, behavioural modification, behavioral modification.	

Eligibility. The next step was a full read of the article to determine eligibility. If the database did not have a full text copy, other methods (i.e., Google Scholar, academia.org, researchgate.com, and personal websites) were used to locate the article if possible. Contacting authors was not undertaken, to avoid response bias (i.e., where authors of newer papers are more likely to respond).

Articles were examined at this stage to ensure all inclusion criteria and no exclusion criteria were met. Any questions regarding eligibility were assessed and dealt with in this stage by the lead author (ZJP) and a contributor (GW).

Judges. The primary judge was the lead author (ZJP), a PhD student. GW, a professor with 30 years of experience and supervisor to the first author, acted as a secondary judge and consulted with the primary judge when needed. Another

contributor (PGSD), a first-year doctor of clinical psychology student, completed ratings of papers to establish inter-rater reliability.

2.2.4. Coding procedures

The coding for control conditions for the analysis of controlled effect sizes was completed by PGSD. All other coding was done by ZJP. Checking of coding and mathematical procedures was conducted by a final contributor (JD), a professor of health management, and statistician with 18 years of experience in academic research.

Coding. Coding was completed using Microsoft Excel. Randomized control trials (RCTs) had to be coded in twice - once for analysis of controlled effect sizes (see below), and again for analysis of uncontrolled effect sizes (see below). Only in the former were control (i.e., non-psychotherapy) conditions coded.

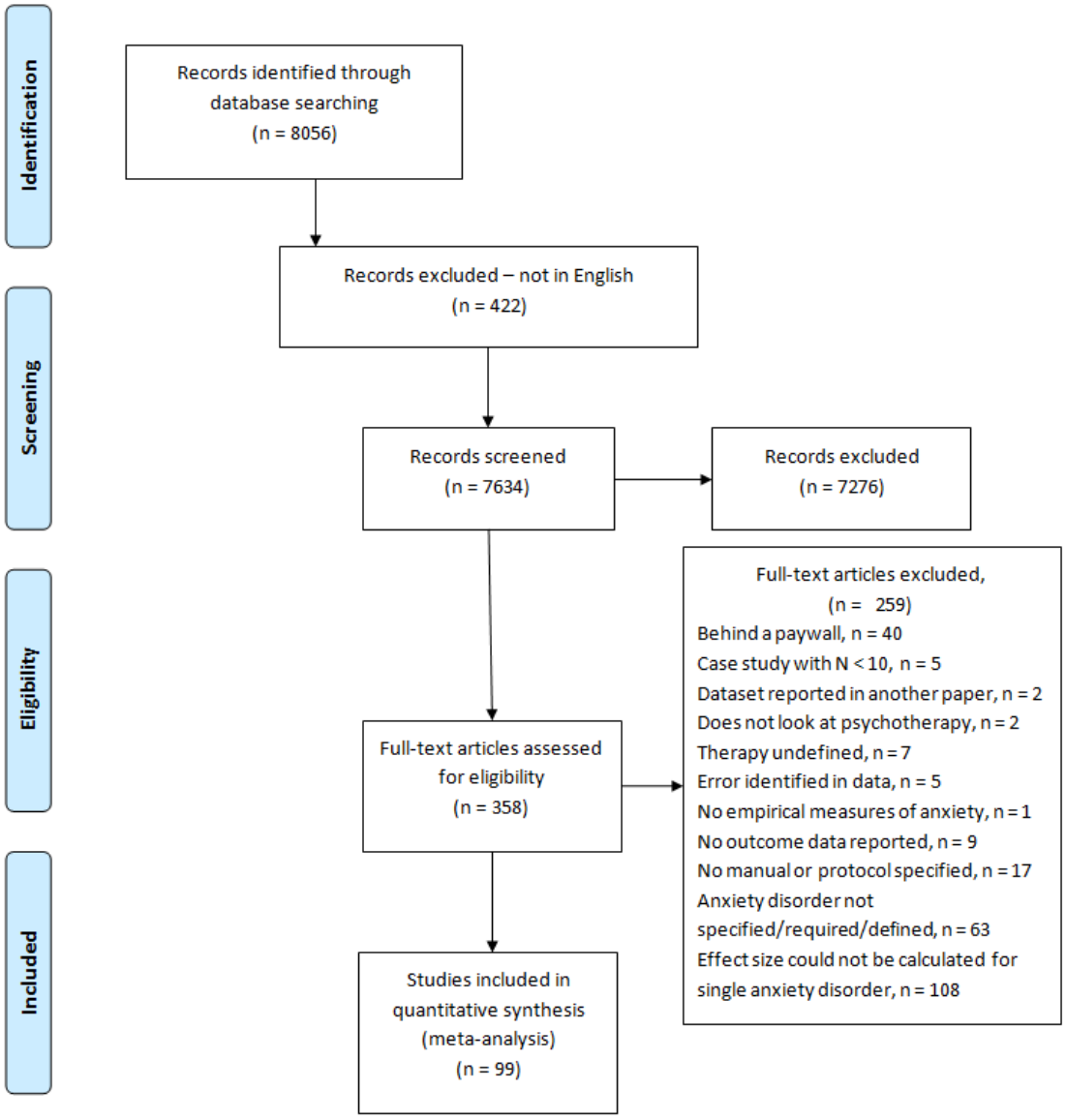

Figure 2.1. Flowchart of identification and selection of articles

The following was coded: author(s); year of publication; anxiety disorder treated (and any additional required disorder for inclusion in the selected study); inclusion criteria; exclusion criteria; use of exposure; study type; the mean and standard deviation at pre-test, post-test, and follow-up (if applicable) for CA and/or ITT analysis; measure used; sample size at post-test; sample size at follow-up; mean age in year with standard deviation; gender by percent female; ethnic group; length of treatment; working alliance; socioeconomic status; education; marital status; Critical Appraisal Skills Programme (CASP) ratings (see below); title; and any notes.

Assessment of quality. CASP rating systems were used to assess the quality of

the studies included. In the end, only the CASP Randomised Controlled Trial Checklist and CASP Cohort Study Checklist were used. The former was used with all efficacy studies, and the latter with all effectiveness studies.

Of the 99 articles, 10 (10.1%) were chosen randomly by a random integer generator from random.org, and then reviewed. All items, except item 8, on both versions of the CASP were rescored on those 10 articles for comparison. Item 8 (from both versions) was omitted as there was no possible answer other than what was initially reported.

The CASP ratings did not influence which studies were included or excluded. As the inclusion criteria for this analysis (see above) are rather stringent with regards to quality, anything that would have been ruled out by the CASP criteria (items 1 to 3 on both scales) would have been ruled out by the inclusion criteria. This overlap occurred due to human error in planning the protocol.

Missing data. No substitution of missing data was carried out. For example, if an article had a follow-up but did not give enough information for the follow-up to be included in analysis, then only the pre-/post-test effect size was included.

Unclear data. In cases where multiple groups were reported as one group without distinction, the information was coded as 'not clearly reported'. This held true unless the combined data pertained to essential data (e.g., inclusion criteria; see above), in which case the article was not included.

2.2.5. Data analysis

All analyses were done by hand using Microsoft Excel, unless stated otherwise. To address the first aim of the study, both analyses of controlled and uncontrolled effect sizes were conducted (see below). To address the second aim, both ANOVA analogues and meta-regressions were conducted (see below).

Publication bias. Three calculations were used to determine the scope and

effect of publication bias. First, an Egger's Regression (Egger, Smith, Schneider, & Minder, 1997) was calculated, to determine the overall publication bias. Due to issues with Egger's Regression (see: Egger & Smith, 1998; Irwig, Macaskill, Berry, & Glasziou, 1998; Song, Khan, Dunnes, & Sutton, 2002; Van Enst, Ochodo, Scholten, Hooft, & Leeflang, 2014), Begg and Mazumdar's (1994) rank correlation test was also calculated. Finally, a Rosenthal's Failsafe-N (Rosenthal, 1979) was calculated to determine how many trivial effects would have to be reported to reduce the overall effect size.

Analysis of controlled effect sizes. RCTs where at least one active treatment is compared to a control condition (e.g., TAU, waitlist, healthy control, no/minimal contact) were included for this analysis. In the cases where a study used two (or more) active treatments, these active treatments were not compared against each other.

All calculations for this analysis were derived from Field (2000), Ellis (2010), and Heges and Pigott (2004). Effect size (*d*) was calculated as $\frac{\bar{x}_{control}-\bar{x}_{experimental}}{SD_{pooled}}$ where SD_{pooled} was calculated using Cohen's simplified formula, $\sqrt{\frac{SD^2_{control}+ SD^2_{experimental}}{2}}$. This way, positive effect sizes indicate that the experimental condition outperformed the control condition, as lower scores indicated greater reduction of distress. In this formula, the mean and standard deviation came from post-test for both the control and experimental group. Next d_{unbiased} was calculated using the following formula: $\left(1 - \frac{3}{4(N-2)-1}\right) d$. d_{unbiased} was used here to control for the difference in sample sizes between the two conditions in each comparison. Variance $(\hat{\sigma}_d^2)$ for controlled analysis was calculated thusly: $\frac{n_i^e+n_i^c}{n_i^e n_i^c} + \frac{d_i^2}{2(n_i^e+n_i^c)}$, where n^e is the sample size of the experimental condition and n^c is the sample size of the control group.

From there, an average effect size (d_+)was estimated using the formula: $\frac{\Sigma\frac{d}{\hat{\sigma}_d^2}}{\Sigma\frac{1}{\hat{\sigma}_d^2}}$. The estimate of standard deviation of the overall effect size ($\hat{\sigma}_{d+}$) was calculated using: $\sqrt{\left(\Sigma\frac{1}{\hat{d}_d^2}\right)^{-1}}$. From there, the overall score was standardized to a *z*-distribution by dividing the overall effect by the estimate of the standard deviation. Heterogeneity (Q) was tested by taking the sum of squared differences between each effect size (*d*) and the overall effect size (d_+). From this, a random-effects model (calculations below) was used to determine the overall effect size.

Standard error for the forest plots was calculated using the standard error of the effect size, and was calculated as follows: $SE_{(\bar{d})} = \frac{d}{\sqrt{d \times n}}$. The calculations for the *z*-statistic are reported below.

Analysis of uncontrolled effect sizes. Arms of studies using TAU, waitlist, non-manualized treatments, or controls other than active treatment were not included for analysis of uncontrolled effect sizes. Only active treatments involving psychotherapy (with or without supplemental treatments) were included in this step.

All calculations for this analysis come from Ellis (2010), Hedges et al. (2004), and Johnson and Eagly (2000). Effect size was calculated as $\frac{\bar{x}_{pre}-\bar{x}_{post}}{SD_{pooled}}$, where SD_{pooled} was calculated using Cohen's simplified formula, $\sqrt{\frac{SD_{pre}^2+SD_{post}^2}{2}}$. This way a positive effect size indicated a reduction in symptoms. In analysis of effect size from pre-test to follow-up, the mean and standard deviation from pre-test and follow-up were used. Similarly, in the analysis of maintenance, mean and standard deviation at from post-test and follow-up were used.

Variance (V_i) was calculated using the following formula $\frac{4\left(1+\frac{d_i^2}{8}\right)}{n_i}$, where d_i is

an individual study's effect size and n_i is an individual study's sample size.

Homogeneity was tested by calculating a *Q*-statistic for each analysis, where$Q = \sum w(d)^2 - \frac{\sum(wd)^2}{\sum w}$, where *w* was the inverse of variance ($1/v_i$). It was expected, and found, that in most cases that the residual error was not normally distributed, or in other words, there was a significant level of heterogeneity (*Q* was greater than a critical chi-square value), and therefore a random-effects model was used.

A τ^2 statistic was calculated using the following formula (*Q*-(*K*-1))/*C*, where *K* was the number of comparisons included and where *C* was the sum of squares of the study weights (*w*) from the fixed-effects model. The random-effects study weights were calculated as: $w^* = \frac{1}{V_i + \tau^2}$. Weighted effect sizes were therefore calculated as the product of w^* and effect size (*d*). The overall mean effect size $(\bar{d}^*)$ was calculated as: $\frac{\sum w^* d}{\sum w^*}$.

Confidence intervals were calculated using effect size $\pm$ (1.96 * standard error). Standard error for the overall sample was calculated by taking the square root of the overall variance, where overall variance was calculated using the following formula: $v_\cdot^* = \frac{1}{\sum w^*}$.

For all tables presented, unless stated otherwise, the unweighted effect sizes are reported. Standard error was calculated. The standard error reported in the tables was calculated using the standard method.

To determine if there was truly an effect, the difference between the observed effect and no effect were calculated on a *z*-distribution. The formula for which is: $\frac{|\bar{d}^* - 0|}{SE_{\bar{d}}}$. If a score was greater than 1.96 (or less than -1.96), then there was a significant effect. If a score is not significant then it cannot be said that there was an effect.

Moderator analyses. Formulas for the moderator analyses come from Hedges

et al. (2004) and Johnson et al. (2000). For four of the five moderator analyses, ANOVA analogues were computed by hand with a chi-square distribution, using a mixed-model methods.

Comparisons were made between study types (i.e., efficacy and effectiveness) but within analysis type (i.e., CA or ITT). No comparisons were made within both types, as in some cases that would be using duplicate data where studies reported both ITT and CA results. All studies were included for this analysis.

Regarding the effects of exposure, a minimum *k* of five was required within each group. Data were grouped based on study type, then by analysis type, and then by exposure use (resulting in eight different combinations). This was done for pre-/post-test effect size and for pre-test to follow-up effect sizes (resulting in a potential of 16 different cases). However, only 13 of the 16 groups meet the minimum *k* of five. ANOVA analogues were used to compare within study types (e.g., efficacy CA with exposure versus efficacy CA without exposure), across study types (e.g., efficacy CA with exposure versus effectiveness CA with exposure). Effectiveness ITT without exposure ($k = 4$ in pre-/post-test and $k = 0$ in pre-test to follow-up) and Effectiveness CA without exposure ($k = 0$ at pre-test to follow-up only) were not included.

Regarding disorders, a minimum *k* of five was expected within each group. Initial analyses revealed that only three disorders would meet this criterion (social anxiety disorder (SAD), PTSD, and OCD). They were grouped as described above, first by study type, then by analysis type, then by disorder type. ANOVA analogues were used to determine if there was a difference in effect size across each study type but within each analysis type for each disorder (e.g., efficacy CA of OCD studies versus effectiveness CA of OCD studies). Regarding exposure and disorder, where possible the groupings of disorders were then subdivided between those with exposure and those without exposure. Only PTSD offered enough data to compare the effects of exposure

between and within study types. The following disorders did not offer enough datasets to conduct moderator analysis: generalized anxiety disorder (GAD), agoraphobia, panic disorder, and simple phobia.

Analysis on year of publication was conducted even if a set of studies from one year had a *k* of less than five and the other years had met minimal amount (this occurs in the analysis of effectiveness studies with CA). All combinations, except effectiveness ITT, were compared in this moderator analysis. Over the course of years included, there were on average 1.5 (range 0-3) studies a year that reported effectiveness ITT.

Length of treatment was grouped into a range as follows: 1-5, 6-10, 11-15, and 16+ sessions. Studies were divided similarly to the other moderators, first by study type, then analysis, then into the length of treatment groups. ANOVA analogues were used to determine the effect of treatment length on the effect size of treatment. No moderator analysis was run on effectiveness studies using ITT analysis, as there was only one source (11-15 sessions) that had a $K > 5$.

Finally, the fifth moderator (therapeutic alliance) was examined using a meta-regression, using SPSS version 21 to conduct the initial regression. For this, the raw effect size (Cohen's *d*), the scores on the therapeutic alliance measure, and *w** were coded into SPSS and run through a weighted linear regression with *w** acting as the case weight. The results were then modified in Excel to find the standard deviation of the slope and the *z*-score. Standard deviation of the slope was calculated by $\frac{SE}{\sqrt{MSE}}$ where SE is the standard error of the slope provided by SPSS and MSE is the mean square error of the overall model as provided by SPSS.

The I^2 index in all cases was 0; in no cases was the *Q*-statistic greater than the *K*-1 in any analyses.

Determining empirical support. This meta-analysis used a slightly stricter version of the criteria set forth by Chambless and Hollon (1998) for determining which

treatments are empirically supported (aim 3). The reason for using this stricter set of criteria is that this meta-analysis examined only experimental versus control conditions in the analysis of controlled effect sizes. This means that comparisons between active treatment conditions, which are allowed under Chambless and Hollon's (1998) criteria, were not considered in this analysis. Furthermore, this meta-analysis only reports on studies published during the target years (2011-2014), independent from all other research.

Treatments were grouped into two categories, as suggested in Chambless and Hollon's paper: 'efficacious' or 'possibly efficacious'. Anything not listed in either category was treated as having no empirical support. To be included in this analysis, RCTs needed 30 participants per condition. All other criteria from Chambless and Hollon were met by the inclusion criteria for this meta-analysis (e.g., must be manualised). To be considered 'efficacious', a study had to be replicated by an independent lab and meet all the criteria set by Chambless and Hollon.

Summary of analyses. Given the number of moderators looked at and the number of possible combinations for comparison, as outlined throughout this methods section, three tables are provided that explain what data were included and what analyses were conducted. Table 2.2 shows the primary effect sizes included and the moderation analysis for the overall effects by disorder. Table 2.3 shows which groupings (detailed above) were included (i.e., $K \geq 5$) and which moderation analyses were conducted. Table 2.4 shows which data was included for examining the moderation effect of number of sessions and for year of publication. These tables do not include the meta-regression conducted nor the controlled analysis for effect size, as neither could readily be placed in any table and would result in two single item tables.

Table 2.2. Primary analyses conducted

	Primary effect size analysis			
	Efficacy		Effectiveness	
	ITT	CA	ITT	CA
Time				
Pre-test to post-test	Inc	Inc	Inc	Inc
Pre-test to follow-up	Inc	Inc	Inc	Inc
Post-test to follow-up	Inc	Inc	Inc	Inc
Pre-test to post-test with a control comparison	Inc	Inc	-	-
	Efficacy		**Effectiveness**	
	ITT	**CA**	**ITT**	**CA**
Disorder				
OCD	Inc	Inc[b]	-	Inc[b]
PTSD	Inc[a]	Inc[b]	Inc[a]	Inc[b]
SAD	Inc	Inc[b]	-	Inc[b]

CA = Completer analysis; Inc = data included; ITT = Intent-to-treat; OCD = Obsessive-compulsive disorder; PTSD = Post-traumatic stress disorder; SAD = Social anxiety disorder.

[a] For each row, looks at the moderation of study type using intent-to-treat analysis.

[b] For each row, looks at the moderation of study type using completer analysis.

Table 2.3. Moderator analysis by study type with and without exposure

	Moderator analyses – study type and exposure							
	Efficacy				Effectiveness			
	Exposure		No exposure		Exposure		No exposure	
	ITT	CA	ITT	CA	ITT	CA	ITT	CA
Time								
Pre-test to post-test	Inc[a, d]	Inc[b, e]	Inc[a]	Inc[b, f]	Inc[d]	Inc[c, e]	-	Inc[c, f]
Pre-test to follow-up	Inc[a, d]	Inc[b, e]	Inc[a]	Inc[b]	Inc[d]	Inc[c, e]	-	-
Disorder								
OCD (pre-/post-test)	-	Inc[e]	-	-	-	Inc[e]	-	-
PTSD (pre-/post-test)	Inc[a]	-	Inc[a]	-	-	Inc[c]	-	Inc[c]
SAD (pre-/post-test)	Inc[a]	-	Inc[a]	-	-	-	-	-

CA = Completer analysis; Inc = data included; ITT = Intent-to-treat; OCD = Obsessive-compulsive disorder; PTSD = Post-traumatic stress disorder; SAD = Social anxiety disorder.

[a] For each row, looks at the moderation of exposure on outcomes in efficacy studies using intent-to-treat analysis.

[b] For each row, looks at the moderation of exposure on outcomes in efficacy studies using completer analysis.

[c] For each row, looks at the moderation of exposure on outcomes in effectiveness studies using completer analysis.

[d] For each row, looks at the moderation of using exposure between study types using intent-to-treat analysis.

[e] For each row, looks at the moderation of using exposure between study types using completer-analysis.

[f] For each row, looks at the moderation of not using exposure between study types using completer-analysis.

Table 2.4. Moderator analysis by study type looking at number of sessions and year of publication

	Moderator analysis – number of sessions and year of publication			
	Efficacy		Effectiveness	
	ITT	CA	ITT	CA
Number of sessions				
1 to 5 sessions	Inc[a]	Inc[b]	-	Inc[c]
6 to 10 sessions	Inc[a]	Inc[b]	-	Inc[c]
11 to 15 sessions	Inc[a]	Inc[b]	-	-
16+ Sessions	Inc[a]	Inc[b]	-	-
Year of publication				
2014	Inc[d]	Inc[e]	Inc[f]	Inc[g]
2013	Inc[d]	Inc[e]	Inc[f]	Inc[g]
2012	Inc[d]	Inc[e]	-	Inc[g]
2011	Inc[d]	Inc[e]	Inc[f]	Inc[g]

CA = Completer analysis; Inc = data included; ITT = Intent-to-treat.

[a] Looked at the moderation effect of number of sessions for intent-to-treat analysis in efficacy studies.

[b] Looked at the moderation effect of number of sessions for completer analysis in efficacy studies.

[c] Looked at the moderation effect of number of sessions for completer analysis in effectiveness studies.

[d] Looked at the moderation effect of year of publication for intent-to-treat analysis in efficacy studies.

[e] Looked at the moderation effect of year of publication for completer analysis in efficacy studies.

[f] Looked at the moderation effect of year of publication for intent-to-treat analysis in effectiveness studies.

[g] Looked at the moderation effect of year of publication for completer analysis in effectiveness studies.

2.3. Results

2.3.1. Summary of study characteristics

A total of 99 studies were included in the main analyses, of which 61 were efficacy studies, reporting 108 active treatment conditions and 40 control conditions. The remaining 38 studies were effectiveness studies, reporting 51 active treatment conditions. Thus, a total of 159 active treatment conditions were included in the main analyses.

Table 2.5 presents the overview of efficacy studies included in the main analyses. Of these studies, 66 conditions reported using exposure techniques, and 42 conditions did not use exposure. In one condition of one study (Andrews et al., 2011), it was not clear if exposure was utilized and referenced a text unavailable to the authors of this meta-analysis. As it was not expressly stated, it was assumed this active treatment condition in this study did not use exposure. The following disorders are represented by this sample of studies: Agoraphobia with panic disorder (k = 2); GAD (k

= 7); obsessive-compulsive disorder (OCD; k = 25)[1]; panic disorder (k = 5); PTSD (k = 27)[2]; social anxiety disorder (SAD; k = 32)[3]; and simple/specific phobia (k = 10)[4].

[1] Two of these conditions were comorbid OCD with an autism spectrum disorder.
[2] Two of these conditions were comorbid PTSD with alcohol use disorder; another two conditions recruited from a treatment resistant PTSD sample.
[3] One of these conditions was comorbid SAD with a personality disorder.
[4] Four in these conditions were flying phobias; four were acrophobia; and two were snake phobias.

Table 2.5. Overview of efficacy studies included in the main analyses.

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
2014 studies										
Asnaani et al. (2014)	SAD	AAT	No	LSAS	22	-	-	Not clearly reported	Not clearly reported	3-sessions
Baker et al. (2014)	PTSD	WET	Yes	CAPS	19	19	12-weeks	Not clearly reported	Not clearly reported	5-sessions
Chen et al. (2014)	PTSD	CBT	No	CRIES-13	10	10	3-Month	Not clearly reported	Not clearly reported	6-Sessions
Ehlers et al. (2014)	PTSD	Intensive CT	Yes	CAPS	30	30	40-Week	60%	39.7 (12.4)	7-days
Ehlers et al. (2014)	PTSD	Weekly CT	Yes	CAPS	31	31	40-Week	58.10%	41.5 (11.7)	12-Sessions
Ehlers et al. (2014)	PTSD	Weekly ST	No	CAPS	30	30	40-Week	56.70%	37.8 (9.9)	12-Sessions
Kucketz et al. (2014)	SAD	AMP	No	LSAS	40	40	4-Month	65%	35.1 (13.3)	8-Sessions
Kucketz et al. (2014)	SAD	AMP + FACT	Yes	LSAS	39	39	4-Month	69.20%	42 (13.3)	8-Sessions
Kucketz et al. (2014)	SAD	iCBT	Yes	LSAS	40	40	4-Month	62.50%	39.5 (12)	9-Sessions
Lloyd, et al. (2014)	PTSD	CPT	Yes	CAPS	30	30	3-Month	Not reported	Not reported	12-sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Newman et al. (2014)	GAD	CAGT	No	HARS	11	11	12-Month	54.50%	42.45 (10.95)	6-Sessions
Newman et al. (2014)	GAD	CBGT6	No	HARS	14	13	12-Month	50%	45.19 (12.61)	6-Sessions
Newman et al. (2014)	GAD	Group CBT	No	HARS	9	5	12-Month	77.80%	37.11 (12.57)	12-Sessions
2013 studies										
Bonsaksen et al. (2013)	SAD	RCT (residential)	No	SPAI-SP	40	32	1-Year	Not reported	37.7 (11.3)	40 group sessions & 10 individual
Bonsaksen et al. (2013)	SAD	RIPT (residential)	No	SPAI-SP	40	37	1-Year	Not reported	37.2 (11.6)	40 group sessions & 10 individual
Farrell et al. (2013)	OCD	ERP + d-cycloserine (25 or 50 mg)	Yes	CYBOCS	9	9	3-Month	Not clearly reported	Not clearly reported	9-sessions
Farrell et al. (2013)	OCD	ERP + placebo (25 or 50 mg)	Yes	CYBOCS	8	8	3-Month	Not clearly reported	Not clearly reported	9-sessions
Foa et al. (2013)	OCD	SRI + ERP	Yes	YBOCS	38	-	-	26%	36.1 (14.1)	8-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Foa et al. (2013)	OCD	SRI + SRT	Yes	YBOCS	11	-	-	45%	41.7 (11.7)	8-Sessions
Hayes-Skelton (2013)	GAD	ABBT	No	PSWQ	30	25	6-Month	60%	33.30 (12.42)	16-Sessions
Hoffart, et al. (2013)	PTSD	CBT - Imaginal Exposure	Yes	PTSD Symptom Scale-Interview	31	-	-	Not clearly reported	Not clearly reported	10-seasions
Hoffart, et al. (2013)	PTSD	CBT Imagery Rescripting	No	PTSD Symptom Scale-Interview	34	-	-	Not clearly reported	Not clearly reported	10-seasions
Hovland (2013)	PD	CBT	Yes	Panic-related distress/disability	19	19	6-Month	73.70%	37.8 (8.9)	12-Sessions
Hovland (2013)	PD	Group physical exercise	No	Panic-related distress/disability	17	17	6-Month	88.20%	38.1 (8.6)	36-Sessions
Kocovski et al. (2013)	SAD	CBGT	Yes	LSAS (CA) SPIN (ITT)	32 (CA) 53 (ITT)	27 (CA) N/A (ITT)	3-Month	52.83%	32.66 (9.07)	12-Sessions 12-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Kocovski et al. (2013)	SAD	MAGT	No	LSAS (CA) SPIN (ITT)	37 (CA) 53 (ITT)	32 (CA) N/A (ITT)	3-Month	49.06%	34.94 (12.52)	12-Sessions 12-Sessions
Ma et al. (2013)	OCD	CCT + pharmacotherapy	No	YBOCS	71	Not Reported	Not included in analysis	47.90%	27.4 (8.2	9-Sessions
Månsson et al. (2013)	SAD	iCBT	Yes	LSAS-LR	12	-	-	85%	32.46 (8.6)	5-sessions
Månsson et al. (2013)	SAD	Attention Bias Modification (internet)	No	LSAS-LR	12	-	-	85%	32.08 (10.9)	10-sessions
Margolies, et al. (2013)	PTSD	CBT for insomnia	No	PSS-SR	20	-	-	10%	36.43 (9.3)	10-sessions
Meyerbroeker et al. (2013)	Agoraphobia with Panic Disorder	CBT + VRET	Yes	PDSS	23	-	-	Not reported	Not reported	20-Sessions
Meyerbroeker et al. (2013)	Agoraphobia with Panic Disorder	CBT + in vivo exposure	Yes	PDSS	21	-	-	Not reported	Not reported	20-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Olatunji (2013)	OCD	CT	Yes	YBOCS	30	25	52-Week	83.33%	36.83 (9.80)	14-Sessions
Olatunji (2013)	OCD	ERP	Yes	YBOCS	30	23	52-Week	65.63%	34.84 (11.38)	14-Sessions
Reynolds et al. (2013)	OCD	CBT	Yes	CYBOCS	25	25	6-Month	Not reported	14.4 (1.35)	6-sessions
Reynolds et al. (2013)	OCD	Parent-enhanced CBT	Yes	CYBOCS	25	25	6-Month	Not reported	14.6 (1.61)	6-sessions
Rus-Calafell et al. (2013)	Simple Phobia (Flying)	VRET	Yes	Fear of Flying Scale	7	7	6-Month	87.00%	37.14 (14.28)	17.43 (4.3) Sessions
Rus-Calafell et al. (2013)	Simple Phobia (Flying)	Imaginal Exposure	Yes	Fear of Flying Scale	8	8	6-Month	Not reported	36.13 (12.59)	14.43 (5.3) Sessions
Russell et al. (2013)	OCD and ASD	ERP	yes	YBOCS	20	18	1-Month	17.40%	28.6 (11.3)	12-Sessions
Russell et al. (2013)	OCD and ASD	AM	No	YBOCS	20	17	1-Month	30.40%	25.2 (13.5)	12-Sessions
Sannible et al. (2013)	PTSD and AUD	Integrated CBT for PTSD + AUD	Yes	CAPS severity	33	33	9-Month	58%	41.85 (12.62)	17-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Sannible et al. (2013)	PTSD and AUD	CBT for AUD + supportive counselling	No	CAPS severity	29	29	9-Month	48%	40.41 (11.21)	10-weeks
Simpson et al. (2013)	OCD	SSRI + ERP	Yes	YBOCS	37	-	-	52.50%	34.3 (12.7)	10-weeks
Sportel et al. (2013)	SAD	Group CBT	Yes	RCADS	84	84	12-Month	67%	14.06 (0.73)	14-sessions
Sportel et al. (2013)	SAD	CBM	No	RCADS	86	86	12-Month	77%	14.12 (0.66)	14-sessions
Storch et al. (2013)	OCD	Sertraline (standard dose) + ERP	Yes	CYBOCS	14	-	-	50%	11.57 (3.06)	14-sessions
Storch et al. (2013)	OCD	Sertraline (titrated slowly) + ERP	Yes	CYBOCS	17	-	-	35.30%	11.47 (3.68)	2 sessions
Tart et al. (2013)	Simple Phobia (Acrophobia)	VRET + D-Cycloserine	Yes	Acrophobia avoidance questionnaire	15	15	1-Month	Not reported	29.33 (14.67)	4-sessions
Tart et al. (2013)	Simple Phobia (Acrophobia)	VRET + Pill Placebo	Yes	Acrophobia avoidance questionnaire	14	14	1-Month	Not reported	37.71 (16.81)	4-sessions
Zang et al. (2013)	PTSD	NET	Yes	HADS - anxiety	11	11	2-Month	73%	56.64 (12.22)	2 to 3 sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Zang et al. (2013)	PTSD	NET (post-wait list)	Yes	HADS - anxiety	11	11	2-Month	82%	54.82 (11.59)	2 to 3 sessions
2012 studies										
Aldahandha et al. (2012)	PTSD	EMDR	Yes	Trauma Systems Inventory	25	22	1-Month	52%	Not clearly reported	10-Sessions
Aldahandha et al. (2012)	PTSD	EMDR (after Wait List)	Yes	Trauma Systems Inventory	26	22	1-Month	53.85%	Not clearly reported	10-Sessions
Andersson (2012)	OCD	iCBT	Yes	YBOCS	49	50	4-Month	66%	33 (12)	12-sessions
Andersson (2012)	OCD	Attention Control	No	YBOCS	51	-	4-Month	66.70%	35 (14)	12-sessions
de Oliveira et al. (2012)	SAD	TBTR	No	LSAS	17	17	12-Month	70.60%	33.9 (9.9)	12-sessions
de Oliveira et al. (2012)	SAD	CT	No	LSAS	19	19	12-Month	78.90%	34.9 (13.4)	8-sessions and one one-day meditation retreat
Jazaieri et al. (2012)	SAD	MBSR	No	LSAS	24	16	3-Month	61.30%	32.87 (8.83)	5-sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Nations et al. (2012)	PD	CBT + Org 25935 (4 mg)	Yes	PDSS	10	10	1-Month	63.60%	33.3 (11.0)	5-sessions
Nations et al. (2012)	PD	CBT + Org 25935 (12 mg)	Yes	PDSS	14	14	1-Month	60%	36.4 (8.9)	1-session
Nations et al. (2012)	PD	CBT + Placebo	Yes	PDSS	13	13	1-Month	78.60%	32.4 (11.2)	1-session
Nave et al. (2012)	Simple Phobia (arachnophobia)	Exposure + D-Cyloserine	Yes	CGI-S	10	-	-	60%	34.6 (12.69)	9-Sessions
Nave et al. (2012)	Simple Phobia (arachnophobia)	Exposure + Placebo	Yes	CGI-S	10	-	-	60%	39 (13.91)	9-Sessions
Nixon et al. (2012)	PTSD	CBT	Yes	CAPS	17	17	6-Month	47%	11.59 (3.31)	8-Sessions
Nixon et al. (2012)	PTSD	CT	No	CAPS	17	17	6-Month	25%	10 (2.48)	24.6 (4.2) Sessions
Willutzki et al. (2012)	SAD	CT	No	social phobia scale	23	16	2-Year	43.80%	Not clearly reported	12-sessions
Willutzki et al. (2012)	SAD	ROCBT	No	social phobia scale	40	35	2-Year	40%	Not clearly reported	6-lessons

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
2011 studies										
Alden et al. (2011)	SAD	interpersonal CBT	No	SIAS	27	21	6-Month	35%	34.7 (*SD* not reported)	7-Sessions
Andrews et al. (2011)	SAD	iCBT	Yes	SIAS	21	-	-	Not clearly reported	Not clearly reported	18-sessions
Andrews et al. (2011)	SAD	Group CBT	No (can't tell)	SIAS	14	-	-	Not clearly reported	Not clearly reported	29-sessions
Belloch et al. (2011)	OCD	CT	No	PSWQ	16	16	-	62.50%	30.44 (5.70)	14-sessions
Bidel et al. (2011)	PTSD	Trauma Management Therapy	Yes	CAPS	14	-	-	0%	58.93 (*SD* not reported)	12-sessions
Bidel et al. (2011)	PTSD	Exposure Therapy	Yes	CAPS	16	-	-	0%	59.76 (*SD* not reported)	5-sessions
Bolton (2011)	OCD	CBT	No	CYBOCS	36	36	3-Month	58%	15 (2.5)	15-sessions
Bolton (2011)	OCD	Brief CBT	No	CYBOCS	36	36	3-Month	64%	14.33 (2.33)	15-sessions
Hedman et al. (2011)	SAD	iCBT	Yes	LSAS	64	64	6-Month	37.50%	35.1 (11.1)	10-Sessions
Hensel-Dittman (2011)	PTSD	NET	Yes	CAPS	11	7	1-Year	Not reported	Not reported	14-sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Hensel-Dittman (2011)	PTSD	SIT	No	CAPS	10	8	1-Year	Not reported	Not reported	14-sessions
Hinton et al. (2011)	PTSD (treatment resistant)	CBT (culturally adapted)	No	PCL	12	12	12-Week	100%	47.6 (8.2)	16-sessions + 3 boosters
Hinton et al. (2011)	PTSD (treatment resistant)	Applied Muscle Relaxation	No	PCL	12	12	12-Week	100%	51.4 (5.9)	16-sessions + 3 boosters
Jónsson et al. (2011)	OCD	Group CBT	Yes	YBOCS	42	31	1-Year	59.60%	32.7 (11.1)	8-sessions
Jónsson et al. (2011)	OCD	CBT	Yes	YBOCS	37	26	1-Year	71.70%	32.7 (9.5)	8-sessions
Karatzias et al. (2011)	PTSD	EMDR	Yes	CAPS	23	23	3-Month	60.90%	41.5 (10.8)	24-sessions
Karatzias et al. (2011)	PTSD	Emotional freedom techniques	Yes	CAPS	23	23	3-Month	52.20%	39.7 (10.9)	16-Sessions
Melfsen et al. (2011)	SAD	CBT	No	ADIS for Children German version	15	-	-	38.10%	10.60 (1.64)	16-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Mörtberg et al. (2011)	SAD	CT	No	LSAS	23	23	5-Year	69%	36.1 (9.8)	14-sessions
Nacasch (2011)	PTSD	PE	Yes	PSS-I	15	15	at least 12-months after treatment	Not reported	34.8 (11.4)	8-Sessions
Newman et al. (2011)	GAD	CBT + Supportive Listening	No	PSWQ	40	40	24-Month	80%	37.39 (11.99)	8-sessions
Paxling et al. (2011)	GAD	iCBT	Yes	PSWQ	44	44	3-Year	82.82%	40 (11.3)	8-sessions
Price & Anderson (2011)	SAD	Group CBT	Yes	Fear of Negative Evaluation - Brief Form	51	-	-	Not clearly reported	Not clearly reported	8-sessions
Price and Anderson (2011)	SAD	Group CBT + VRET	Yes	Fear of Negative Evaluation - Brief Form	40	-	-	Not clearly reported	Not clearly reported	1-session

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Price, Mehta, et al. (2011)	SAD	VRET	Yes	Personal Report of Confidence as a Speaker	31	-	-	Not clearly reported	Not reported	1-session
Raes et al. (2011)	Simple Phobia (arachnophobia)	One-session exposure (Exposure only)	Yes	Spider Phobia Questionnaire	16	16	1-Month	Not clearly reported	Not clearly reported	10-sessions
Raes et al. (2011)	Simple Phobia (arachnophobia)	One-session exposure (Behavioural experiments)	Yes	Spider Phobia Questionnaire	15	15	1-Month	Not clearly reported	Not clearly reported	10-sessions
Rakowska (2011)	SAD	BST	Yes	SCL-PHOB	30	30	3-Month	Not clearly reported	Not clearly reported	16-sessions
Rakowska (2011)	Sad and personality disorder	BST	Yes	SCL-PHOB	30	30	3-Month	Not clearly reported	Not clearly reported	16-sessions
Stangier et al. (2011)	SAD	CT	No	LSAS	38	38	1-Year	44.70%	34.6 (12.9)	14-sessions
Stangier et al. (2011)	SAD	interpersonal psychotherapy	No	LSAS	38	38	1-Year	57.90%	33.9 (9.5)	20-sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Storch et al. (2011)	OCD	CBT (family based, teletherapy)	yes	CYBOCS	16	14	3-Month	37%	11.00 (2.5)	17-sessions
Tolin et al. (2011)	OCD	Stepped-care ERP	Yes	YBOCS	19	19	-	68.40%	35.95 (15.16)	6-sessions
Tolin et al. (2011)	OCD	ERP	Yes	YBOCS	15	15	-	46.70%	31.33 (10.50)	6-sessions
Tortella-Feliu et al. (2011)	Simple Phobia (flying)	Self-administered computer-aided exposure	Yes	Fear of Flying Scale	21	21	1-Year	47.62% based on reported n of 10 females out of 21 (authors reported: 52.8%, this is accurate if n is 11)	36.24 (8.51)	3-sessions
Tortella-Feliu et al. (2011)	Simple Phobia (flying)	VRET	Yes	Fear of Flying Scale	19	19	1-Year	52.63%	36.89 (11.71)	3-sessions

[1]ABBT - Acceptance Based Behaviour Therapy; AM - Anxiety Management; AMP - Attention Modification Program; AMP + FACT - Attention Modification Program + Fear Activation; AAT - Approach-Avoidance Task; BST - Brief Strategic Therapy; CAGT - Computer-Assisted Group CBT; CBM - Cognitive Bias Modification; CBGT6 - Six-session Group CBT; CBGT - Group CBT; CBT - Cognitive Behavioural Therapy; CCT - Cognitive-Coping Therapy; CPT - Cognitive Processing Therapy; CT - Cognitive Therapy; ERP - Exposure and Response/Ritual Prevention; iCBT - Internet-delivered/based CBT; MAGT - Mindfulness and Acceptance-Based Therapy; MBSR - Mindfulness-Based Stress

Reduction; MCT - Metacognitive Therapy; NET - Narrative Exposure Therapy; RCT - Residential Cognitive Group Therapy; RIPT - Residential Interpersonal Group Therapy; ROCBT - Resource-Orientated Cognitive Behavioural Therapy; SIT - Stress Incoulation Training; SRI - Seretonin Reuptake Inhibitor; SSRI - Selective Seretonin Reuptake Inhibitor; SRT - Stress Managment Training; ST - Supportive Therapy; TBTR - Trial-based Cognitive Therapy; WET - Written Exposure Therapy; VRET - Virtual reality exposure therapy.

[2]ADIS - Anxiety Disorders Interview Schedule; CAPS - Clinician administered PTSD scale; CGI-S: Clinical Global Impression - Severity Scale; CRIES-13 - Children's Revised Impact of Event Scale; CYBOCS- Children's Yale-Brown Obsessive-Compulsive Scale; HADS - Hospital Anxiety and Depression Scale; HARS - Hamilton Anxiety Rating Scale; LSAS - Liebowitz Social Anxiety Scale; LSAS-SR - Liebowitz Social Anxiety Scale - Self-report; PCL - PTSD Checklist; PDS - Post Traumatic Stress Diagnostic Scale; PDSS - Panic Disorder Severity Scale; PSS-I - PTSD Symptom Scale-Interview; PSS-SR - PTSD Symptom Scale-Self-Report; PSWQ - Penn State Worry Questionnaire; RCADS - Revised Children's Anxiety and Depression Scale; SCL-PHOB - Derogatis Symptom Checklist - Phobic Anxiety; SIAS - Social Interaction Anxiety Scale; SPIN - Social Phobia Inventory; YBOCS - Yale-Brown Obsessive-Compulsive Scale.

Table 2.6 presents the overview of effectiveness studies included in the main analyses. Of these studies (K = 51), 43 conditions reported using exposure techniques; the remaining eight conditions did not use exposure. The following disorders are represented by this sample of studies: GAD (k = 6); OCD (k = 11)[5]; panic disorder (k = 5)[6]; PTSD (k = 23)[7]; social anxiety disorder (k = 6)[8].

[5] One of these conditions focused on hoarding.
[6] Two of these conditions presented comorbid cases, one of panic disorder with irritable bowel syndrome and the other of panic disorder with a personality disorder.
[7] One condition was comorbid PTSD with major depressive disorder; two conditions were comorbid PTSD with traumatic brain injury.
[8] One condition was comorbid SAD with any depressive disorder.

Table 2.6. Overview of effectiveness studies included in the main analyses.

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
2014 studies										
Dalrymple et al. (2014)	SAD and a depressive disorder	ACT	Yes	LSAS (Fear subscale)	18 (CA) 38 (ITT)	-	-	45.90%	36.43 (13.0)	16-Sessions
Jeffreys et al. (2014)	PTSD	CPT-G	Yes	PCL	20	-	-	Not clearly reported	Not clearly reported	12-Sessions
Jeffreys et al. (2014)	PTSD	CPT	Yes	PCL	7	-	-	Not clearly reported	Not clearly reported	12-Sessions
Jeffreys et al. (2014)	PTSD	CPT-C	Yes	PCL	150	-	-	Not clearly reported	Not clearly reported	12-Sessions
Jeffreys et al. (2014)	PTSD	PE	Yes	PCL	81	-	-	5.90%	38.2 (13.26)	10 to 15-Sessions
Matulis et al. (2014)	PTSD	CPT (developmenta-lly adapted)	Yes	CAPS	12	12	6-Week	Not reported	18.08 (1.67)	30-Sessions
Shirotsuki et al. (2014)	SAD	CBT	Yes	SFNE	15	-	-	46.67%	30.06 (No SD reported)	6-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
2013 studies										
Wesner et al. (2014)	PD	Group CBT	Yes	CGI	48	-	-	75%	38.8 (11.1)	12-Sessions
da la Cruz et al. (2013)	OCD	ERP	Yes	CYBOCS	50	-	-	Not clearly reported	Not clearly reported	13-Sessions
da la Cruz et al. (2013)	OCD	ERP	Yes	CYBOCS	103	-	-	Not clearly reported	Not clearly reported	12-Sessions
Dèttore, et al. (2013)	OCD	ERP	Yes	YBOCS	38	-	-	50%	33.38 (9.44)	50 Sessions
Eftekhari et al. (2013)	PTSD	PE	Yes	PCL	1389 (CA) 1888 (ITT)	-	-	12.90%	46.8 (14.3)	9 (4.2) Seasons
Furukawa et al. (2013)	SAD	CBGT	Yes	LSAS	52	Not included	Follow-up reported using a different measure	50%	35.5 (9.3)	13.4 (4.5) Seasons
King, et al. (2013)	PTSD	MBCT	No	CAPS	15 (CA) 20 (ITT)	-	-	Not reported	60.1 (9.7)	8-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Kleim, et al. (2013)	PTSD	TF-CBT	No	PDSS	268	-	-	58.60%	38.67 (11.26)	12-Sessions
Najavits et al. (2013)	PTSD	Seeking Safety	No	Basis-32	7	-	-	57%	45.89 (10.61)	18.86 (8.17)
Sripada et al. (2013)	PTSD	PE	Yes	PCL-S	51 CA 40 ITT	-	-	Not reported	49.3 (No SD reported)	12 (2.7) CA 10 (3.8) ITT
Stott et al. (2013)	SAD	Internet-delivered CT	Yes	LSAS	11	-	-	45%	33.1 (5.9)	13.7 (4.0) Weeks
van der Helden et al. (2013)	GAD	Group Metacognitive Therapy	Yes	PSWQ	24 (CA) 33 (ITT)	14 (CA) 33 (ITT)	6-Month	63.64%	31.33 (8.96)	14-Sessions
Voder et al. (2013)	PTSD	PE	Yes	PCL-M	55 (CA) 66 (ITT)	-	-	0%	64.92 (5.35)	12.67 (6.94) (CA) 11.37 (6.94) (ITT)
Yuen et al. (2013)	SAD	ABBT	Yes	LSAS	26	26	3-Month	25%	35 (10.8)	12-Sessions
2012 studies										
Tarquinio et al. (2012)	PTSD	EMDR	Yes	IES Total	12	12	6-Month	100%	33 (4.6)	5-Session

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Wagner et al. (2012)	PTSD	iCBT	No	PDS	15	-	-	86.70%	29.3 (7.1)	Not reported (10 assignments)
Wroe et al. (2012)	OCD	Group CBT	Yes	YBOCS	15	-	-	54.50%	35 (10.54)	7 to 8 sessions
2011 studies										
Alvarez et al. (2011)	PTSD	CPT (residential)	Yes	PCL	104	-	-	0%	50.20 (11.55)	14-Sessions
Ayers et al. (2011)	OCD (hoarding)	CBT	Yes	UCLA Hoarding Severity Scale	12	10	6-Month	58.33%	73.66 (6.54)	26 sessions
Chard et al. (2011)	PTSD and mild TBI	CPT (residential)	No	CAPS	28	-	-	0%	33.93 (8.59)	14.11 (1.17) sessions 7-weeks (2 group and minimum of 2 individual a week)

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Chard et al. (2011)	PTSD and moderate/severe TBI	CPT (residential)	No	CAPS	14	-	-	0%	38.7 (10.59)	14.71 (1.98) Sessions 7-weeks (2 group and minimum of 2 individual a week)
Gros, Antony, et al. (2011)	PD	Group CBT	Yes	ASI	32	-	-	Not clearly reported	Not clearly reported	12-Sessions
Gros, Antony, et al. (2011)	PD and Irritable Bowel Syndrome	Group CBT	Yes	ASI	23	-	-	Not clearly reported	Not clearly reported	12-Sessions
Gros, Yoder, et al. (2011)	PTSD	PE	Yes	PCL-M	27	-	-	11.10%	45.2 (16.0)	12-Sessions
Haraguchi et al. (2011)	OCD	Group CBT	Yes	YBOCS	28 (CA) 36 (ITT)	-	-	82.1% (CA) 77.8% (ITT)	32.6 (10.7) (CA) 30.9 (10.3) (ITT)	12-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Hindo et al. (2011)	SAD	One-Session Exposure	Yes	LSAS	32	23	1-Month	75%	28.25 (9.22)	1-Session
Long et al. (2011)	PTSD	Imagery Rescripting and Exposure Therapy	Yes	PCL-M	33	-	-	0%	62.1	6-Sessions
Nakatani et al. (2011)	OCD	CBT/ERP	Yes	CYBOCS	40	-	-	41.10%	12.5 (2.9)	12-Sessions
Nakatani et al. (2011)	OCD	CBT/ERP	Yes	CYBOCS	69	-	-	41.60%	14.7 (1.7)	12-Sessions
Nevo et al. (2011)	PTSD	PE (TMT)	Yes	CPSS patient	15	15	1-Month	86%	10.8 (4.39)	7 to 16-Sessions
Nixon et al. (2011)	PTSD and MDD	Behavioural activation, Cognitive Restructuring, and exposure	Yes	CAPS	20	20	3-Month	85%	45.3 (11.88)	12 to 16 sessions
Telch et al. (2011)	PD	CBT	Yes	SPRAS	119	-	-	Not clearly reported	Not clearly reported	12-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Telch et al. (2011)	PD and personality disorder	CBT	Yes	SPRAS	54	-	-	Not clearly reported	Not clearly reported	12-Sessions
Turek et al. (2011)	PTSD	PE	Yes	PCL-M	43 (CA) 65 (ITT)	-	-	11%	31.77 (8.19)	7 (5) sessions (ITT) 10 (4) sessions (CA)
Westra et al. (2011)	GAD	CBT	Yes	PSWQ	11	11	1-Year	63.64%	41.36 (*SD* not reported)	6-Sessions
Westra et al. (2011)	GAD	CBT	Yes	PSWQ	6	6	1-Year	83.33%	49.83 (*SD* not reported)	6-Sessions
Westra et al. (2011)	GAD	CBT	Yes	PSWQ	8	8	1-Year	87.50%	33.75(*SD* not reported)	6-Sessions
Westra et al. (2011)	GAD	CBT	Yes	PSWQ	7	7	1-Year	57.14%	42.86 (*SD* not reported)	6-Sessions

Study	Disorder	Treatment[1]	Exposure	Measure[2]	N used in pre-/post-analysis	N used in follow-up analysis	Follow-up length	% female participants	Age *M* (*SD*)	Treatment Length
Wetherall et al. (2011)	GAD	CBT + Escitalopram	No	HAMA	10	-	-	60%	68.6 (8.59)	16-Sessions
Wootton et al. (2011)	OCD	iCBT	Yes	YBOCS	21	21	3-Month	59%	35.18 (11.32)	8-lessons

[1]ABBT - Acceptance Based Behaviour Therapy; ACT - Acceptance and Commitment Therapy; CBGT - Group CBT; CBT - Cognitive Behavioural Therapy; CPT - Cognitive Processing Therapy; CPT-G - Cognitive Processing Therapy - Group; CT - Cognitive Therapy; EMDR - Eye Movement Desensitization and Reprocessing; ERP - Exposure and Response/Ritual Prevention; ICBT - Internet-delivered/based CBT; MBCT - Mindfulness-based Cognitive Therapies; PE - Prolonged Exposure; PE (TMT) - Prolonged Exposure (Trauam Mastery Therapy); TF-CBT - Trauma-Focused Cognitive Behavioural Therapy.

[2]ASI - Anxiety Sensitivity Index; Basis-32 - Behavior And Symptom Identification Scale; CAPS - Clinician Administered PTSD Scale; CGI - Clinical Global Impression; CPSS - Child PTSD symptom Scale; CYBOCS - Children's Yale-Brown Obsessive-Compulsive Scale; HAMA - Hamilton Anxiety Rating Scale; IES - Impact of Event Scale; LSAS - Liebowitz Social Anxiety Scale; PCL - PTSD Checklist; PCL-C - PTSD Checklist - Civilian; PCL-M - PTSD Checklist - Military; PCL-S - PTSD Checklist - Specific; PDS - Post Traumatic Stress Diagnostic Scale; PDSS - Panic Disorder Severity Scale; PSWQ - Penn State Worry Questionnaire; SPARS - Sheehan Patient-Related Anxiety Scale; SFNE - Short Fear of Negative Evaluation Scale; YBOCS - Yale-Brown Obsessive-Compulsive Scale.

2.3.2. Summary of quality assurance

Tables 2.7 and 2.8 present the quality ratings for efficacy and effectiveness studies, respectively. Follow-up was reported in 84 (77.06%) of the conditions in efficacy studies. However, one study could not be used, as it did not report the follow-up sample size (Ma et al., 2013). Regarding effectiveness studies, only 15 (29.41%) of conditions reported a follow-up. All reported follow-up data were useable.

Inter-rater reliability. The overall inter-rater reliability score was 76%. There was substantial agreement between the two raters - Cohen's $k_{weighted}$ = .71 (95% CI .57 to .85).

Table 2.7. Methodological quality (CASP RCT rating) of efficacy studies included in the main analyses.

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
2014 studies												
Asnaani et al. (2014)	Y	Y	Y	Y	Y	Y	Small	51.18 - 67.82	N	N	Y	7
Baker et al. (2014)	Y	Y	Y	CT	CT	Y	Large	13.67 - 24.23	CT	CT	Y	5
Chen et al. (2014)	Y	Y	CT	CT	N	N	Large	22.59 - 31.81	Y	CT	Y	4
Ehlers et al. (2014)	Y	Y	Y	N	Y	Y	Large	22.49 - 41.95	Y	Y	Y	8
Ehlers et al. (2014)	Y	Y	Y	N	Y	Y	Large	16.87 - 37.07	Y	Y	Y	8
Ehlers et al. (2014)	Y	Y	Y	N	Y	Y	Large	36.51 - 59.25	Y	Y	Y	8
Kucketz et al. (2014)	Y	Y	Y	CT	CT	Y	Small	58.86 - 76.24	Y	Y	Y	7
Kucketz et al. (2014)	Y	Y	Y	CT	CT	Y	Large	42.45 - 56.21	Y	Y	Y	7
Kucketz et al. (2014)	Y	Y	Y	CT	CT	Y	Large	37.57 - 49.89	Y	Y	Y	7
Lloyd, et al. (2014)	Y	Y	CT	CT	Y	N	Large	38.05 - 58.01	Y	N	Y	5
Newman et al. (2014)	Y	Y	CT	Y	Y	Y	Large	7.4 - 13.36	Y	Y	Y	8
Newman et al. (2014)	Y	Y	CT	Y	Y	Y	Large	9.25 - 15.83	Y	Y	Y	8
Newman et al. (2014)	Y	Y	CT	Y	Y	Y	Large	9.55 - 21.45	Y	Y	Y	8
2013 studies												
Bonsaksen et al. (2013)	Y	Y	CT	Y	Y	Y	Large	97.99 - 119.83	Y	Y	Y	8
Bonsaksen et al. (2013)	Y	Y	CT	Y	Y	Y	Large	103.66 - 124.24	Y	Y	Y	8
Farrell et al. (2013)	Y	Y	CT	Y	CT	Y	Large	10.32 - 17.24	CT	Y	Y	6
Farrell et al. (2013)	Y	Y	CT	Y	CT	Y	Large	8.41 - 19.09	CT	Y	Y	6
Foa et al. (2013)	Y	Y	Y	Y	Y	Y	Large	10.13 - 12.87	Y	N	Y	8
Foa et al. (2013)	Y	Y	Y	Y	Y	Y	Large	14.22 - 19.78	Y	N	Y	8
Hayes-Skelton (2013)	Y	CT	CT	N	Y	Y	Large	48 - 54.06	Y	N	Y	5
Hayes-Skelton (2013)	Y	CT	CT	N	Y	Y	Large	48.63 - 55.93	Y	N	Y	5
Hoffart, et al. (2013)	Y	Y	Y	CT	Y	Y	Large	15.06 - 24.74	Y	N	Y	7

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
Hoffart, et al. (2013)	Y	Y	Y	CT	Y	Y	Large	17.91 - 27.51	Y	N	Y	7
Hovland (2013)	Y	Y	Y	CT	Y	Y	Large	0.17 - 1.35	Y	Y	Y	8
Kocovski et al. (2013)	Y	Y	Y	Y	Y	Y	Medium	29.94 - 37.5 (ITT)	Y	Y	Y	9
Kocovski et al. (2013)	Y	Y	Y	Y	Y	Y	Large	29.93 - 37.89 (ITT)	Y	Y	Y	9
Ma et al. (2013)	Y	Y	Y	N	Y	CT	Large	13.52 - 16.08	Y	N	Y	6
Månsson et al. (2013)	Y	Y	Y	Y	Y	Y	Large	32.49 - 67.01	Y	N	Y	8
Månsson et al. (2013)	Y	Y	Y	Y	Y	Y	Large	46.72 - 64.94	Y	N	Y	8
Margolies, et al. (2013)	Y	Y	CT	Y	Y	Y	Medium	27.5 – 39.5	Y	N	N	6
Meyerbroeker et al. (2013)	Y	Y	N	Y	Y	Y	Large	0.66 - 1.4	Y	N	Y	7
Meyerbroeker et al. (2013)	Y	Y	N	Y	Y	Y	Large	0.64 - 1.38	Y	N	Y	7
Olatunji (2013)	Y	Y	Y	Y	Y	Y	Large	12.92 - 19.34	Y	Y	Y	9
Olatunji (2013)	Y	Y	Y	Y	Y	Y	Large	12.97 - 19.29	Y	Y	Y	9
ReyNlds et al. (2013)	Y	Y	Y	Y	Y	Y	Large	10.96 - 17.68	Y	Y	Y	9
ReyNlds et al. (2013)	Y	Y	Y	Y	Y	Y	Large	10.74 - 17.42	Y	Y	Y	9
Rus-Calafell et al. (2013)	Y	Y	CT	Y	Y	Y	Large	38.53 - 60.05	Y	Y	Y	8
Rus-Calafell et al. (2013)	Y	Y	CT	Y	Y	Y	Large	38.94 - 60.32	Y	Y	Y	8
Russell et al. (2013)	Y	Y	Y	Y	Y	Y	Large	14.12 - 21.48	Y	Y	Y	9
Russell et al. (2013)	Y	Y	Y	Y	Y	Y	Medium	17.43 - 24.17	Y	Y	Y	9
Sannible et al. (2013)	Y	Y	Y	Y	Y	Y	Large	33.78 - 51.82	Y	Y	Y	9
Sannible et al. (2013)	Y	Y	Y	Y	Y	Y	Large	37.15 - 56.27	Y	Y	Y	9
Simpson et al. (2013)	Y	Y	Y	Y	Y	Y	Large	11.03 - 14.97	Y	N	Y	8
Sportel et al. (2013)	Y	Y	Y	Y	Y	Y	Small	11.31 - 13.39	Y	Y	Y	9
Sportel et al. (2013)	Y	Y	Y	Y	Y	Y	Medium	10.19 - 12.49	Y	Y	Y	9
Storch et al. (2013)	Y	Y	Y	Y	Y	Y	Large	10.34 - 20.52	Y	N	Y	8

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
Storch et al. (2013)	Y	Y	Y	Y	Y	Y	Large	13.57 - 20.79	Y	N	Y	8
Storch et al. (2013)	Y	Y	Y	Y	Y	Y	Large	12.32 - 18.8	Y	N	Y	8
Tart et al. (2013)	Y	Y	Y	CT	Y	Y	Large	5.25 - 12.75	Y	Y	Y	8
Zang et al. (2013)	Y	Y	Y	Y	Y	Y	Large	3.6 - 6.94	CT	N	Y	7
Zang et al. (2013)	Y	Y	Y	Y	Y	Y	Large	3.13 - 6.87	CT	N	Y	7
2012 studies												
Aldahandha et al. (2012)	Y	Y	CT	CT	Y	Y	Lage	41.76 - 45.76	CT	N	Y	5
Aldahandha et al. (2012)	Y	Y	CT	CT	Y	Y	Lage	42.68 - 47.7	CT	N	Y	5
Andersson (2012)	Y	Y	Y	Y	Y	Y	Large	11.19 - 14.69	Y	Y	Y	9
Andersson (2012)	Y	Y	Y	Y	Y	Y	Medium	17.73 - 20.03	Y	N	Y	8
de Oliveira et al. (2012)	Y	Y	CT	Y	Y	Y	Large	39.95 - 71.35	Y	Y	Y	8
de Oliveira et al. (2012)	Y	Y	CT	Y	Y	Y	Large	50.07 - 73.29	Y	Y	Y	8
Jazaieri et al. (2012)	Y	Y	CT	CT	Y	Y	Large	48.09 - 62.91	Y	N	Y	6
Nations et al. (2012)	Y	Y	Y	N	Y	Y	Large	4.38 - 6.22	Y	Y	CT	7
Nations et al. (2012)	Y	Y	Y	N	Y	Y	Large	5.18 - 10.02	Y	Y	CT	7
Nations et al. (2012)	Y	Y	Y	N	Y	Y	Large	4.27 - 8.93	Y	Y	CT	7
Nave et al. (2012)	Y	Y	Y	Y	Y	Y	Large	2.29 - 3.71	Y	N	Y	8
Nave et al. (2012)	Y	Y	Y	Y	Y	Y	Large	2.28 - 3.12	Y	N	Y	8
Nixon et al. (2012)	Y	Y	Y	Y	Y	Y	Large	12.97 - 37.27	Y	Y	Y	9
Nixon et al. (2012)	Y	Y	Y	Y	Y	Y	Large	13.82 - 37.68	Y	Y	Y	9
Wells et al. (2012)	Y	Y	N	Y	CT	Y	Large	6.64 - 26.96	Y	N	Y	6
Willutzki et al. (2012)	Y	Y	CT	CT	CT	Y	Large	14.39 - 23.53	Y	CT	CT	4
Willutzki et al. (2012)	Y	Y	CT	CT	CT	Y	Large	13.94 - 22.42	Y	CT	CT	4

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
2011 studies												
Alden et al. (2011)	Y	Y	CT	Y	Y	Y	Large	30.34 - 39.52	Y	Y	Y	8
Andrews et al. (2011)	Y	Y	N	CT	Y	Y	Medium	37.2 - 50.8	Y	N	Y	6
Andrews et al. (2011)	Y	Y	N	CT	Y	Y	Large	34.06 - 53.66	Y	N	Y	6
Belloch et al. (2011)	Y	Y	N	N	N	Y	Medium	44.32 - 57.14	Y	Y	Y	6
Bidel et al. (2011)	Y	Y	CT	Y	Y	Y	Large	56.43 - 81.57	Y	N	Y	7
Bolton (2011)	Y	Y	Y	Y	Y	Y	Large	6.89 - 12.11	Y	Y	Y	9
Bolton (2011)	Y	Y	Y	Y	Y	Y	Large	9.86 - 16.14	Y	Y	Y	9
Hedman et al. (2011)	Y	Y	Y	Y	Y	Y	Large	34.52 - 44.28	Y	Y	Y	9
Hedman et al. (2011)	Y	Y	Y	Y	Y	Y	Large	42.28 - 54.72	Y	Y	Y	9
Hensel-Dittman (2011)	Y	Y	N	Y	Y	Y	Large	61.25 - 92.21	Y	N	Y	7
Hensel-Dittman (2011)	Y	Y	N	Y	Y	Y	Small	70.95 - 94.25	Y	N	Y	7
Hinton et al. (2011)	Y	Y	CT	Y	Y	Y	Large	30.56 - 47.64	Y	N	Y	7
Hinton et al. (2011)	Y	Y	CT	Y	Y	Y	Large	54.13 - 69.07	Y	N	Y	7
Jónsson et al. (2011)	Y	Y	N	Y	Y	Y	Large	16.35 - 21.31	Y	Y	Y	8
Jónsson et al. (2011)	Y	Y	N	Y	Y	Y	Large	15.69 - 21.01	Y	Y	Y	8
Karatzias et al. (2011)	Y	Y	Y	Y	Y	Y	Large	30.4 - 55	Y	Y	Y	9
Karatzias et al. (2011)	Y	Y	Y	Y	Y	Y	Large	29.75 - 51.25	Y	Y	Y	9
Melfsen et al. (2011)	Y	Y	CT	Y	Y	Y	Large	2.86 - 4	Y	N	Y	7
Mörtberg et al. (2011)	Y	Y	Y	Y	Y	Y	Large	45.34 - 59.46	Y	Y	Y	9
Mörtberg et al. (2011)	Y	Y	Y	Y	Y	Y	Large	36.98 - 57.42	Y	Y	Y	9
Nacasch (2011)	Y	Y	Y	N	Y	Y	Large	14.29 - 23.51	Y	Y	Y	8
Newman et al. (2011)	Y	Y	CT	N	N	Y	Large	45.61 - 52.51	N	N	N	3
Paxling et al. (2011)	Y	Y	Y	Y	Y	Y	Large	53.98 - 61.66	Y	Y	Y	9
Price and Anderson (2011)	Y	Y	CT	Y	Y	Y	Large	33.3 - 36.96	Y	N	Y	7

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
Price and Anderson (2011)	Y	Y	CT	Y	Y	Y	Small	34.89 - 40.67	Y	N	Y	7
Price, Mehta, et al. (2011)	Y	Y	CT	CT	CT	N	Large	13.86 - 18.98	Y	N	Y	4
Raes et al. (2011)	Y	Y	Y	Y	Y	N	Large	10.04 - 13.46	Y	Y	Y	8
Raes et al. (2011)	Y	Y	Y	Y	Y	N	Large	8.27 - 13.73	Y	Y	Y	8
Rakowska (2011)	Y	Y	CT	Y	Y	Y	Large	0.09 - 0.51	Y	Y	Y	8
Rakowska (2011)	Y	Y	CT	Y	Y	Y	Large	0.54 - 0.98	Y	Y	Y	8
Stangier et al. (2011)	Y	Y	Y	Y	Y	Y	Large	32.78 - 46.2	Y	Y	Y	9
Storch et al. (2011)	Y	Y	Y	CT	Y	Y	Large	5.97 - 16.29	Y	N	Y	7
Tolin et al. (2011)	Y	Y	Y	Y	Y	Y	Large	12.67 - 17.65	Y	Y	Y	9
Tolin et al. (2011)	Y	Y	Y	Y	Y	Y	Large	11.12 - 17.38	Y	Y	Y	9
Tortella-Feliu et al. (2011)	Y	Y	CT	Y	Y	Y	Large	44.25 - 54.95	Y	N	Y	7
Tortella-Feliu et al. (2011)	Y	Y	CT	Y	Y	Y	Large	41.07 - 50.33	Y	N	Y	7

Table 2.8. Methodological quality (CASP cohort rating) of effectiveness studies included in the main analyses.

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
2014 studies												
Dalrymple et al. (2014)	Y	Y	Y	N	(a) N (b) N	(a) N (b) N	Large	34.81 - 45.05 (ITT)	CT	CT	CT	3
Jeffreys et al. (2014)	Y	CT	CT	CT	(a) CT (b) CT	(a) N (b) N	Large	47.44 - 57.46	Y	Y	Y	4
Jeffreys et al. (2014)	Y	CT	CT	CT	(a) CT (b) CT	(a) N (b) N	Large	25.86 - 39	Y	Y	Y	4
Jeffreys et al. (2014)	Y	CT	CT	CT	(a) CT (b) CT	(a) N (b) N	Large	51.95 - 56.27	Y	Y	Y	4
Jeffreys et al. (2014)	Y	CT	CT	CT	(a) CT (b) CT	(a) N (b) N	Large	30.33 - 35.19	Y	Y	Y	4
Matulis et al. (2014)	Y	Y	Y	Y	(a) N (b) N	(a) Y (b) N	Large	22.38 - 55.78	Y	Y	Y	8
Shirotsuki et al. (2014)	Y	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	32.26 - 43.08	Y	Y	Y	9
Wesner et al. (2014)	Y	Y	Y	Y	(a) CT (b) CT	(a) N (b) N	Large	2.39 - 3.01	Y	Y	Y	7
2013 studies												
da la Cruz et al. (2013)	Y	Y	CT	N	(a) N (b) N	(a) N (b) N	Large	12.95 - 17.45	CT	Y	Y	4
da la Cruz et al. (2013)	Y	Y	CT	N	(a) N (b) N	(a) N (b) N	Large	12.54 - 15.66	CT	Y	Y	4
Dèttore, et al. (2013)	CT	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	15.83 - 20.85	Y	Y	Y	8

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
Eftekhari et al. (2013)	Y	Y	Y	Y	(a) N (b) Y	(a) N (b) N	Medium	47.04 - 48.96 (ITT)	Y	Y	CT	7
Furukawa et al. (2013)	Y	Y	Y	Y	(a) N (b) Y	(a) N (b) Y	Large	46.79 - 60.21	Y	Y	Y	9
King, et al. (2013)	Y	CT	Y	Y	(a) N (b) N	(a) N (b) N	Medium	52.48 - 72.72 (ITT)	CT	CT	CT	3
Kleim, et al. (2013)	Y	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	0.98 - 1.16	Y	N	Y	8
Najavits et al. (2013)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	0.24 - 1.16	CT	CT	CT	2
Plagge et al. (2013)	Y	Y	Y	Y	(a) Y (b) N	(a) N (b) N	Medium	49.63 - 59.57	Y	Y	Y	8
Sripada et al. (2013)	Y	Y	Y	Y	(a) CT (b) CT	(a) N (b) N	Large	83.11 - 101.49 (ITT)	Y	Y	Y	7
Stott et al. (2013)	Y	CT	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	22.01 - 57.59	Y	Y	Y	7
van der Helden et al. (2013)	Y	Y	Y	Y	(a) Y (b) Y	(a) Y (b) Y	Large	46.33 - 56.09 (ITT)	Y	Y	Y	11
Voder et al. (2013)	Y	CT	Y	N	(a) N (b) N	(a) N (b) N	Large	39.5 - 47.08 (ITT)	Y	Y	Y	5
Yuen et al. (2013)	Y	Y	Y	Y	(a) Y (b) Y	(a) Y (b) N	Large	39.38 - 56.04	Y	Y	CT	9
2012 Studies												
Tarquinio et al. (2012)	Y	Y	N	N	(a) N (b) N	(a) Y (b) N	Large	26.41 - 32.19	N	Y	Y	5

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
Wagner et al. (2012)	Y	Y	CT	CT	(a) N (b) N	(a) N (b) N	Large	8.93 - 18.81	CT	CT	CT	2
Wroe et al. (2012)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	12.36 - 20.18	Y	Y	Y	7
2011 studies												
Alvarez et al. (2011)	Y	Y	Y	N	(a) Y (b) Y	(a) N (b) N	Medium	53.04 - 57.96	Y	Y	Y	8
Andersson et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	6.98 - 13.02	Y	Y	Y	9
Ayers et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) Y (b) Y	Large	18.8 - 25.7	Y	Y	Y	9
Chard et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	40.7 - 57.22	Y	Y	N	8
Chard et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	28.58 - 46.7	Y	Y	N	8
Gros, Antony, et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	16.94 - 25.26	Y	Y	Y	7
Gros, Antony, et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	23.39 - 34.01	Y	Y	CT	6
Gros, Yoder, et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	43.03 - 52.57	Y	Y	Y	7
Gros, Yoder, et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	27.64 - 35.56	Y	Y	Y	7
Haraguchi et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	16.52 - 21.48 (ITT)	Y	Y	Y	9

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
Hindo et al. (2011)	Y	CT	Y	Y	(a) Y (b) Y	(a) Y (b) N	Large	48.02 - 63.46	Y	Y	Y	9
Long et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	50.72 - 60.68	Y	Y	Y	7
Nakatani et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	8 - 11.6	Y	Y	Y	7
Nakatani et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	9.53 - 13.07	Y	Y	Y	7
Nevo et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) Y (b) N	Large	9.04 - 10.96	Y	Y	Y	8
Nixon et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) Y (b) N	Large	32.11 - 56.09	Y	Y	Y	10
Olino et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) N (b) N	Large	10.98 - 11.8	Y	Y	Y	9
Telch et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	14.91 - 21.25	Y	Y	Y	7
Telch et al. (2011)	Y	Y	Y	Y	(a) N (b) N	(a) N (b) N	Large	22.31 - 32.51	CT	Y	Y	6
Turek et al. (2011)	Y	CT	Y	Y	(a) N (b) Y	(a) N (b) N	Large	41.54 - 51.04	Y	Y	Y	6
Westra et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) Y (b) Y	Large	30.11 - 49.07	Y	Y	Y	11
Westra et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) Y (b) Y	Large	44.12 - 69.22	Y	Y	Y	11

Study	1	2	3	4	5	6	7	8 (95% CI)	9	10	11	Total Yes
Westra et al. (2011)	Y	Y	Y	Y	(a) Y (b) Y	(a) Y (b) Y	Large	25.51 - 39.49	Y	Y	Y	11
\Wetherall et al. (2011)	Y	CT	Y	Y	(a) N (b) N	(a) N (b) N	Medium	4.23 - 12.17	CT	CT	CT	3
Wootton et al. (2011)	Y	CT	Y	Y	(a) Y (b) Y	(a) Y (b) N	Large	10.33 - 14.87	Y	Y	Y	9

2.3.3. Publication bias

Regarding efficacy CA studies, visual inspection of the funnel plot, presented in figure 2.2(a), indicated possible publication bias, this was confirmed by an Egger's Regression (pre- vs. post-treatment): (B0) = 9.24, 95% CI = [4.86 – 13.61], $p \leq .001$. This was confirmed by Begg-Mazumdar's rank correlation, $\tau_a = 0.31$, $p = .002$. However, the necessary number of unpublished null trials to reduce the obtained mean effect size to trivial levels would be 2865. This suggests that there probably is not a file-drawer problem.

Figure 2.2(b) presents the funnel plot for publication bias for efficacy studies using ITT analysis, indicating potential publication bias. Again, this was confirmed by a significant Egger's Regression (pre- vs. post-treatment): (B0) = 11.06, 95% CI = [8.84 – 13.29], $p \leq .001$. This was confirmed by a Begg-Mazumdar's rank correlation, $\tau_a = 0.4$, $p \leq .001$. However, the necessary numbers of unpublished null trials to reduce the obtained mean effect size to trivial levels would be 7833. This suggests there probably is not a file-drawer problem.

Figure 2.2(c) presents the funnel plot for publication bias for effectiveness studies using CA, indicating potential publication bias. This was confirmed by a significant Egger's Regression (pre- vs. post-treatment): (B0) = 5.09, 95% CI = [2.59 – 7.60]. $p \leq .001$. This was also confirmed by a Begg-Mazumdar's rank correlation, $\tau_a = 0.23$, $p = .019$. However, the necessary number of unpublished null trials to reduce the obtained mean effect size to trivial levels would be 6106. This suggests there probably is not a file-drawer problem.

Figure 2.2(d) presents the funnel plot for publication bias for effectiveness studies using ITT analysis, indicating potential publication bias. This bias was confirmed by a significant Egger's Regression (pre- vs. post-treatment): (B0) = 15.42, 95% CI = [10.12 – 20.72], $p \leq .001$. This was also confirmed by a Begg-Mazumdar's

rank correlation, though given the low *K* this result should be interrupted with caution, $\tau_a = 0.3$, $p = .037$. However, the necessary number of unpublished null trials to reduce the obtained mean effect size to trivial levels would be 713. Again, this suggests there probably is not a file-drawer problem.

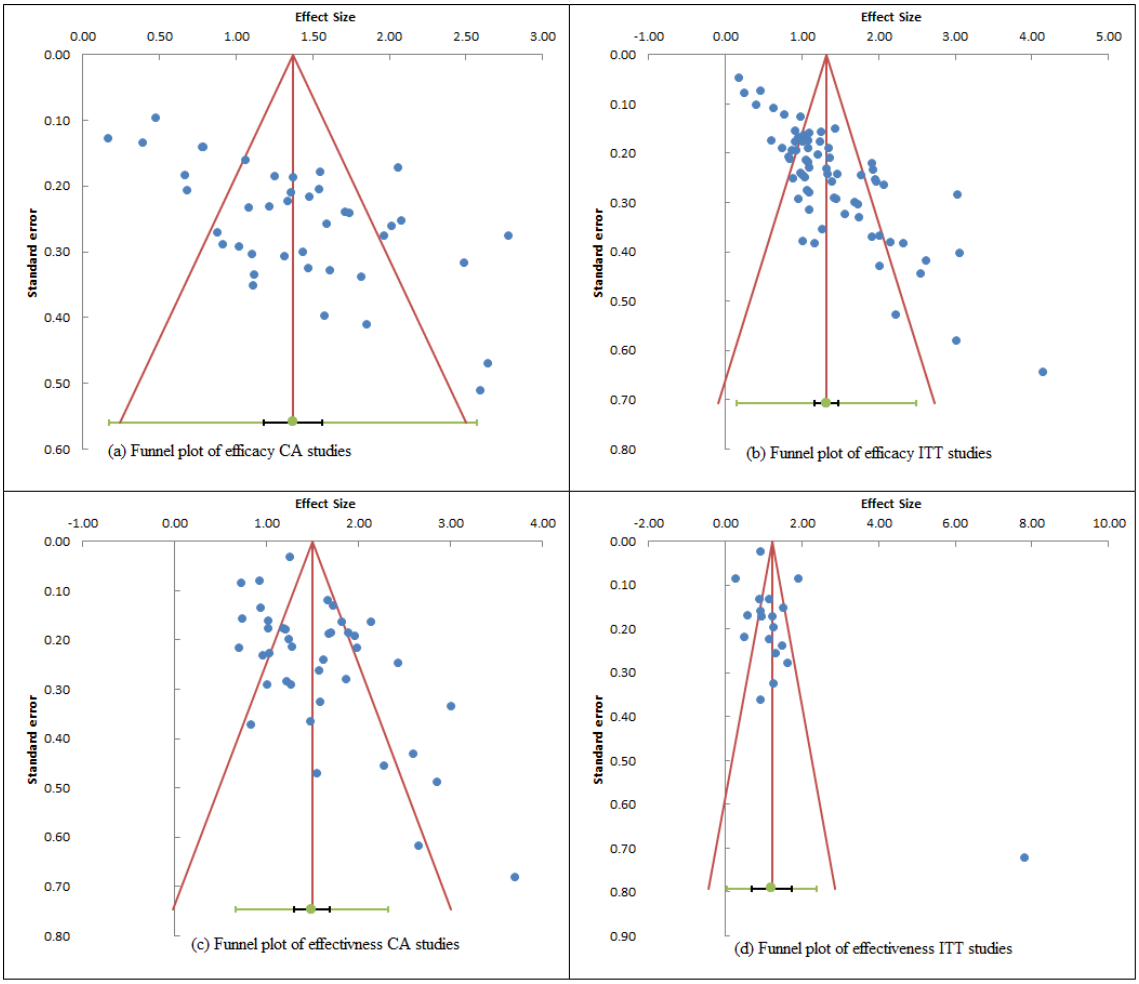

Figure 2.2. Funnel plots for publication bias.

2.3.4. Analysis of controlled effect sizes

Figures 2.3 and 2.4 present the forest plots for the analysis of controlled effect sizes for CA and ITT analyses respectively. In all but two cases (in the ITT set), the experimental condition performed better than the control condition.

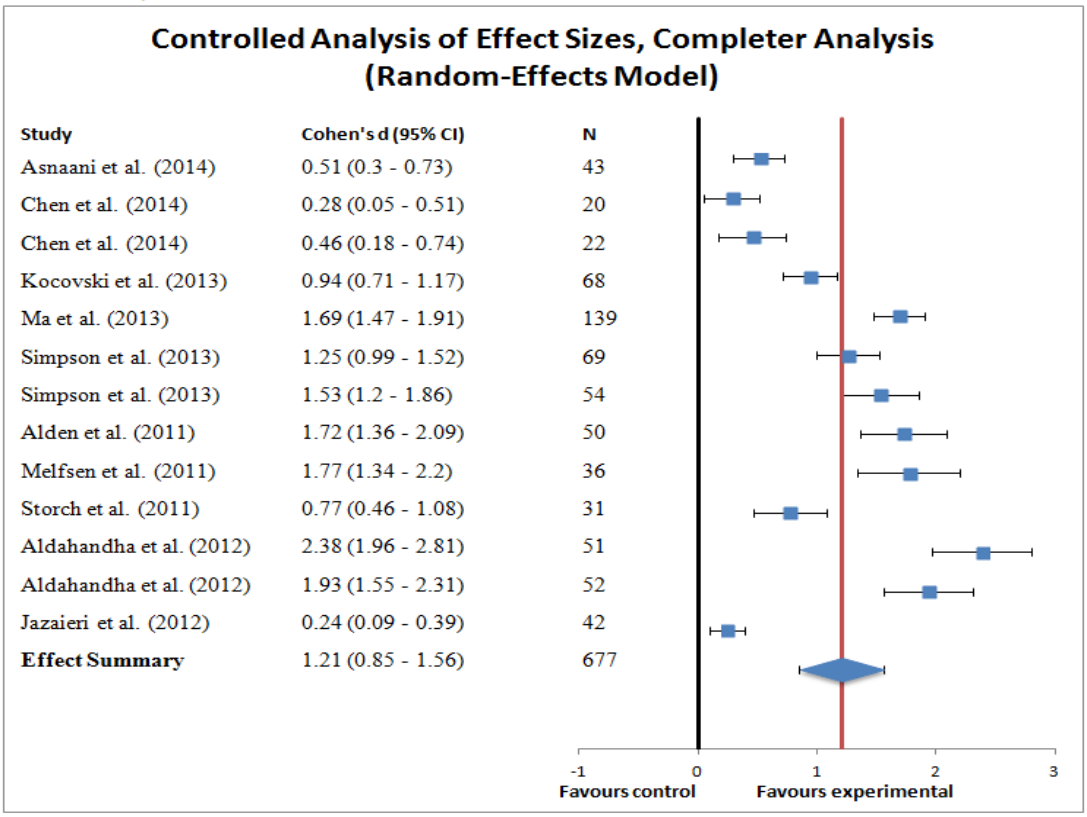

Figure 2.3. Forest plot for controlled effect sizes for completer analysis (using random-effects model).

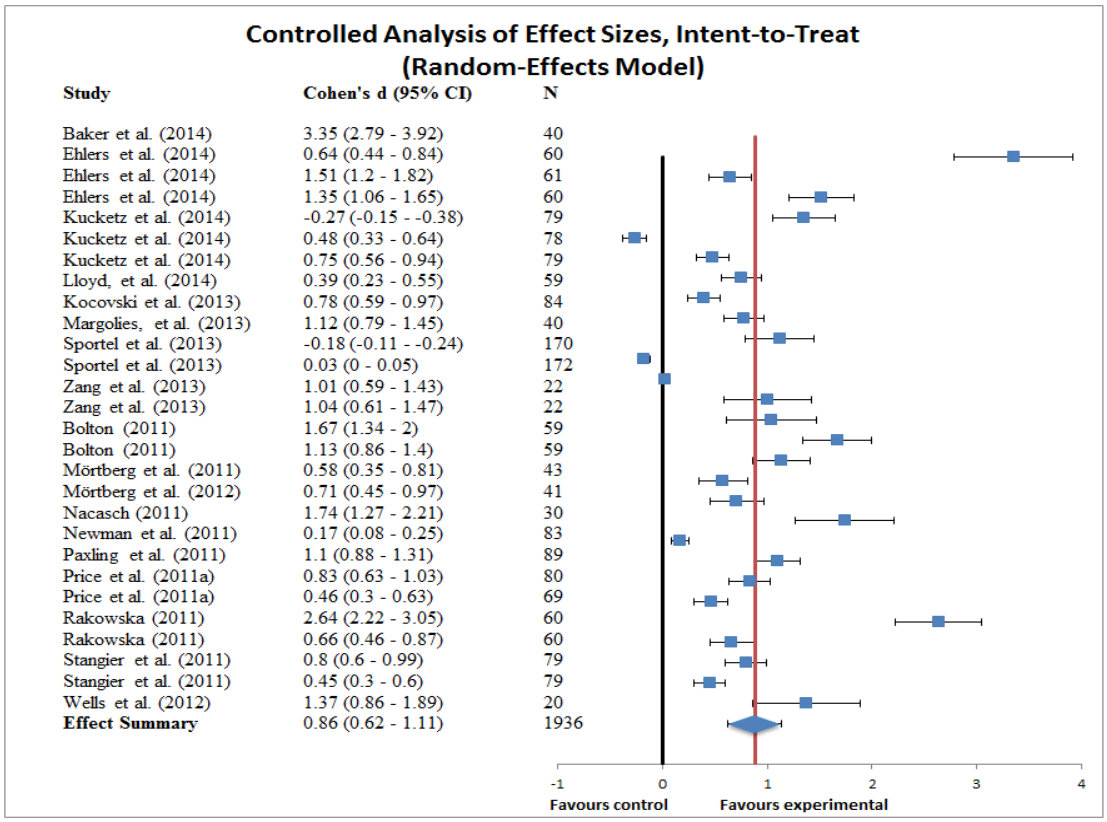

Figure 2.4. Forest plot for controlled effect sizes for intent-to-treat analysis (using random-effects model).

2.3.5. Analysis of uncontrolled effect sizes

Pre-/post-test. Table 2.9 presents the analyses for uncontrolled effect sizes from pre- to post-test. Overall, all analyses yielded significant results, $p < .001$ in all cases. The mean effect sizes were all large ($\geq$ 1.15 in all cases).

Pre-test to follow-up. Table 2.9 presents the findings for the uncontrolled effect sizes from post-test to follow-up. Overall, all analyses yielded significant results, $p < .001$ in all cases. The mean effect sizes were all large ($\geq$ 1.4 in all case).

Maintenance (post-test to follow-up). Table 2.9 also presents the findings for the analysis of uncontrolled effect sizes from post-test to follow-up (i.e., maintenance). Only efficacy studies had a significant effect; [Efficacy CA ($\bar{d}^*$= 0.23, p = .046) and Efficacy ITT ($\bar{d}^*$= 0.16, p = .003)]. Neither effectiveness analysis yielded significant results ($p \geq .34$ in both cases). Therefore, there is support for a continued effect from therapies after completion of treatment in efficacy studies. No such support exists for effectiveness studies.

Table 2.9. Summary of meta-analysis results for overall effect sizes

	Efficacy									
	Completer analysis					Intent-to-treat analysis				
	k	$\bar{d}^*$	SE	95% CI	*z*	*k*	$\bar{d}^*$	SE	95% CI	*z*
Pre- to post-test	41	1.37	.09	1.19 - 1.56	14.6	69	1.25	.08	1.1 - 1.40	16.43
Pre-test to follow-up	29	1.63	.15	1.34 - 1.93	10.72	53	1.41	.08	1.24 - 1.57	16.66
Post-test to follow-up	29	0.23	.11	.01 - .45	2.08	53	0.17	.05	.06 - .27	3.09
	Effectiveness									
	Completer analysis					Intent-to-treat analysis				
Pre- to post-test	40	1.47	.08	1.3 - 1.63	17.58	19	1.15	.14	.87 - 1.43	8.08
Pre-test to follow-up	8	1.62	.3	1.04 - 2.2	5.47	6	1.77	.41	.97 - 2.58	4.31
Post-test to follow-up	8	0.01	.21	-0.4 - .43	0.07	6	0.10	.18	-0.25 - .45	.057
	OCD (pre- to post-test)									
	Completer analysis					Intent-to-treat analysis				
	k	$\bar{d}^*$	SE	95% CI	*z*	*k*	$\bar{d}^*$	SE	95% CI	*z*
Efficacy	12	1.39	.2	1.0 - 1.77	7.09	13	1.72	.17	1.39 - 2.06	10.02
Effectiveness	9	1.63	.12	.12 - 1.86	13.29	4	-	-	-	-
	PTSD (pre- to post-test)									
	Completer analysis					Intent-to-treat analysis				
Efficacy	9	1.44	.26	.94 - 1.94	5.6	19	1.26	.12	1.03 - 1.48	10.92
Effectiveness	18	1.40	.13	1.15 - 1.66	10.73	10	1.30	.23	.85 - 1.75	5.71
	SAD (pre- to post-test)									
	Completer analysis					Intent-to-treat analysis				
Efficacy	13	1.61	.12	.93 - 1.39	10.05	20	0.87	.11	.67 - 1.08	8.27
Effectiveness	5	1.08	.19	.19 - .71	5.70	1	-	-	-	-

2.3.6. Moderator analyses

Exposure use. Table 2.10 reports the outcomes from the examination of exposure as a moderator. Only in efficacy ITT studies was exposure a moderating variable in the outcome of therapy. Studies with treatments using some form of exposure in efficacy ITT ($\bar{d}^*$= 1.39, SE = .1) out performed those treatments that did not use an exposure element, ($\bar{d}^*$= 0.96, SE =.1), p = .002.

Disorder. The overall effects size for each disorder are presented in table 2.10. All primary analyses for disorder were significant and most had large effect sizes.

Regarding OCD, the only analyses possible (due to number of conditions available) were between study type and CA and the comparison between study types using CA and exposure techniques. The results of which are reported in table 2.10. In neither case was there a significant difference, $p \geq .30$ in both cases.

The results from the moderator analyses of PTSD are also presented in Table

2.10. Again, exposure was found to be a moderating factor in the differences in effect size for efficacy ITT studies, where those who received exposure ($\bar{d}^*$= 1.43, SE = 0.15) had better outcome than those who did not receive exposure ($\bar{d}^*$= .94, SE = 0.18). Overall, treatments for PTSD were found to have a large and significant effect size.

Regarding SAD, only analyses involving CA between study types and efficacy studies using ITT analyses with and without exposure could be conducted. The results of which are presented in table 2.10. Neither result was significant, $p \geq .285$ in both cases.

Length of treatment. Table 2.10 presents the findings for the moderator analyses of the length of treatment. Length of treatment did not appear to moderate the effect size from pre- to post-test.

Therapeutic Alliance. A meta-regression examining therapeutic alliance's association with effect size at end of treatment yielded a non-significant model $F(1, 4) = 1.78$, $p = .275$. The meta-regression equation was also not significant, $z = .34$, $p = .377$.

Year of publication. Year of publication did not moderate the effect size at the end of treatment in any condition. Table 2.10 presents the findings for each study and analysis type by year. Table 2.10 also presents the only significant difference found, which was between efficacy and effectiveness studies with completer analyses published in the year 2011.

Table 2.10. Moderators in the treatment of anxiety disorders.

	K	$\bar{d}^*$	SE	95% CI	Subgroup analysis		
Exposure at Pre-/post-test					*Q*	*df*	*p*
Efficacy – Completer					3.64	1	.056
With exposure	18	1.56	0.12	1.33 - 1.79			
Without exposure	23	1.22	0.13	.96 - 1.48			
Efficacy - Intent-to-treat					9.49	1	.002
With exposure	49	1.40	0.1	1.2 - 1.59			
Without exposure	20	0.96	0.1	.75 - 1.16			
Effectiveness Completer					0.29	1	.590
With exposure	35	1.49	0.09	1.32 - 1.66			
Without exposure	5	1.31	0.31	.7 - 1.92			
CA between study types - with exposure					.001	1	.903
Efficacy	18	1.56	0.12	1.33 - 1.79			
Effectiveness	35	1.49	0.09	1.31 - 1.66			
CA between study types - without exposure					0.07	1	.786
Efficacy	23	1.22	0.13	.96 - 1.48			
Effectiveness	5	1.31	0.31	.7 - 1.92			
ITT between study types - with exposure					2.89	1	.089
Efficacy	49	1.40	0.1	1.2 - 1.59			
Effectiveness	15	1.12	0.13	.86 - 1.38			
Exposure at Pre-test to follow-up							
Efficacy – Completer					0.27	1	.603
With exposure	11	1.71	0.19	1.34 - 2.09			
Without exposure	18	1.55	0.23	1.1 - 2.02			
Efficacy - Intent-to-treat					0.15	1	.698
With exposure	37	1.56	0.1	1.35-1.76			
Without exposure	16	1.35	0.51	.36 - 2. 35			
CA between study types - with exposure					0.07	1	.792
Efficacy	11	1.71	0.19	1.34 - 2.09			
Effectiveness	8	1.62	0.3	1.04 - 2.21			
ITT between study types - with exposure					0.26	1	.613
Efficacy	37	1.56	0.1	1.35-1.76			
Effectiveness	6	1.77	0.41	.97 - 2.76			

	K	$\bar{d}^*$	SE	95% CI	Subgroup analysis		
					Q	*df*	*p*
OCD (Pre-/post-test)					1.06	1	.302
Completer between study type							
Efficacy	12	1.39	0.2	1.0 - 1.77			
Effectiveness	9	1.63	0.12	1.39 - 1.86			
Completer between study type with exposure					0.06	1	.800
Efficacy	8	1.57	.19	1.2 - 1.93			
Effectiveness	9	1.63	0.12	1.39 - 1.86			
PTSD (Pre-/post-test)							
CA between study type					0.02	1	.887
Efficacy	9	1.44	0.26	.94 - 1.94			
Effectiveness	18	1.4	0.13	1.15 - 1.66			
ITT between study types					0.02	1	.899
Efficacy	18	1.27	0.12	1.03 – 1.51			
Effectiveness	10	1.3	0.23	0.85 - 1.75			
Efficacy – ITT							
With exposure	12	1.46	0.17	1.14 – 1.79	4.66	1	.031
Without exposure	6	0.94	0.18	.59 - 1.29			
Effectiveness - CA and exposure					0.12	1	.729
With exposure	13	1.43	0.15	1.14 - 1.73			
Without exposure	5	1.31	0.31	.7 - 1.92			
SAD (Pre-/post-test)							
CA between study type					0.13	1	.714
Efficacy	13	1.16	0.12	.12 - 1.39			
Effectiveness	5	1.08	0.19	.71 - 1.45			
Efficacy - ITT and exposure					1.14	1	.285
With exposure	10	0.96	0.17	.63 - 1.29			
Without exposure	10	0.74	0.12	.51 - .97			
Session Length							
Efficacy – CA					3.81	3	.283
1 to 5 sessions	5	1.72	0.46	.83 - 2.61			
6 to 10 sesions	11	1.11	0.16	.80 - 1.43			
11 to 15 sessions	10	1.51	016	1.19 - 1.83			
16+ Sessions	15	1.39	.15	1.11 - 1.68			
Efficacy – ITT					1.86	3	.601
1 to 5 sessions	13	1.57	.26	1.06 - 2.07			
6 to 10 sesions	29	1.20	.13	.95 - 1.46			
11 to 15 sessions	22	1.20	.09	1.01 - 1.39			
16+ Sessions	6	1.24	.17	.89 - 1.58			
Effectivenss – CA					2.04	1	.154
6 to 10 sessions	11	1.27	.15	.98 - 1.56			
11 to 15 sessions	22	1.55	.12	1.31 - 1.78			

	K	$\bar{d}^*$	SE	95% CI	Subgroup analysis		
					Q	*df*	*p*
Year of Publication							
Efficacy – Completer					7.59	3	.055
2014	5	0.83	.21	.42 – 1.23			
2013	14	1.49	.17	1.16 – 1.82			
2012	9	1.51	.23	1.06 – 1.96			
2011	13	1.21	.14	.95 – 1.48			
Efficacy – Intent-to-treat					2.82	3	.420
2014	8	1.33	.23	.88 – 1.78			
2013	28	1.10	.12	.85 – 1.34			
2012	8	1.49	.28	.94 – 2.03			
2011	25	1.31	.10	1.12 – 1.51			
Effectiveness – Completer					3.29	3	.349
2014	7	1.41	.25	.92 – 1.90			
2013	11	1.31	.11	1.09 – 1.53			
2012	3	1.72	.44	.86 – 2.57			
2011	19	1.63	.15	1.33 – 1.92			
Effectivness – Intent-to-treat					1.55	2	.460
2014	2	0.60	.47	-0.32 – 1.53			
2013	8	1.20	.22	.78 – 1.63			
2011	9	1.24	.24	.76 – 1.72			
Difference between study types – Completer (2011)					4.10	1	.043
Efficacy	13	1.21	.14	.95 – 1.48			
Effectiveness	19	1.63	.15	1.33 – 1.92			

2.3.7. Empirically supported treatments

Table 2.11 details which treatments met Chambless and Hollon's (1998) criteria for empirically supported treatments, within the limitations outlined above. Again, this analysis of which treatments are empirically supported looks at the research collected for this meta-analysis independent of all other research. This means that a study listed as 'possibly efficacious' here might have been consider efficacious in the wider literature. Some of the treatments in the 'possibly efficacious' group had been replicated, but the replications lacked a sufficient sample size, while others lacked any independent replication.

Table 2.11. Treatments and their level of empirical support.

Disorder	Treatments[1]	Notes
OCD		
Efficacious	• None to add	
Possibly efficacious	• CBT (Bolton 2011)	Lacks independent replication with an appropriate sample size
	• ERP (Simpson et al. 2013)	Lacks independent replication with an appropriate sample size.
PTSD		
Efficacious	• None to add	
Possibly efficacious	• CT/Intensive CT (Ehlers et al. 2014)	Lacks independent replication with an appropriate sample size.
	• CPT (Lloyd et al. 2013)	Lacks independent replication
SAD		
Efficacious	• CBT (Kucketz et al., 2014; Price & Anderson, 2011)	Supported by several other studies, that lack an appropriate sample size
Possibly efficacious	• BST (Rakowska, 2011)	Lacks independent replication
	• CBM (Sportel et al., 2013)	Lack independent replication
	• CT (Stangier et al. 2011)	Lack independent replication with an appropriate sample size
	• MAGT (Kucketz et al., 2014)	Lacks independent replication; needs each component tested seperately.

[1] BST – Brief Strategic Therapy; CBM - Cognitive Bias Modification; CBT – Cognitive Behavioural Therapy; CT – Cognitive Therapy; ERP – Exposure and Ritual/Response prevention; MAGT - Mindfulness and Acceptance-Based Therapy.

2.4. Discussion

This was a meta-analysis of efficacy and effectiveness studies of the psychotherapeutic treatment of anxiety disorders. It included studies from a period of over three years. In addition, it considered possible moderators, such as type of anxiety disorder, use or absence of an exposure therapy element, length of treatment, therapeutic alliance, and year of publication. While the studies allowed firm conclusions regarding outcome by the end of treatment, it was noteworthy that the number of effectiveness studies with follow-up data was limited.

Overall, psychotherapy had a large effect size in the treatment of anxiety disorders. However, there was no overall difference between efficacy studies and effectiveness studies, indicating that the impact of psychotherapy is as positive in 'real life' settings as in highly controlled 'lab' settings. Finally, patients whose therapy included an exposure element fared substantially better by the end of therapy than those who did not have any exposure element to their psychotherapy. There were not enough studies to consider this difference within all individual disorders, but it is noteworthy that those patients with PTSD who received exposure did significantly better than those

who did not receive exposure. In contrast, there was no such difference for the treatment of SAD.

The findings of this meta-analysis are generally in line with what is reported in other meta-analyses (Abramowitz, 1996; Bisson, Ehler, Matthews, Pilling, Richard, & Turner, 2007; Hofmann et al., 2008; Taylor, 1996; Van Etten & Taylor, 1998). CBT performed better than most controls, as Hofmann et al. (2008) found. This meta-analysis supports the findings of Bisson et al. (2007) and Van Etten et al. (1998), in that CBT and EMDR are efficacious treatments for PTSD. It also concurs with the conclusion that exposure and response/ritual prevention (ERP) is highly efficacious in the treatment of OCD (Abramowitz, 1996). Results show no difference between CBT and treatments with an element of exposure for social anxiety disorder, as has previously been concluded (Feske & Chambless, 1995). There was no difference in effect sizes between effectiveness and efficacy studies. This finding is not what was expected considering the literature (e.g., Gibbons, Stirman, DeRubeis, Newman, & Beck, 2013). This lack of difference may be due to the inclusion criteria, the lack of variance due to heterogeneity across the studies (as indicated by the I^2 index being 0 in all cases), issues related to the weighting or use of effect sizes (Ferguson, 2009; Hedges & Pigott, 2004), or issues with meta-analytic methods in general (Ellis, 2010; Hedges & Pigott, 2004).

2.4.1. Clinical implications

Exposure was shown to be the only moderator in ITT analyses and in PTSD treatments. No such effect was found in CA and with other disorders, though the likelihood of finding this effect might have been reduced by publication bias. As ITT is a more accurate representation of what occurs in daily practice, these findings show that it is important for clinicians to consider the use of exposure techniques in treatment of anxiety and related disorders.

The data regarding the treatment of OCD indicate that CBT or ERP should be used. Considering PTSD, exposure had the most support, though both cognitive therapy (CT) and cognitive processing therapy may also work. Considering SAD, CBT should be used as the frontline treatment, while both mindfulness and acceptance based therapy and CT might also be effective.

2.4.2. Research implications

Future studies should explore the difference between CA and ITT with regards to the use of exposure. As this meta-analysis revealed that the effect of exposure only moderated outcomes in ITT analysis and not CA, the question as to why remains. It is quite possible that the sample size was inadequate for the CA to show a moderation effect. Another explanation for this finding is that everyone in the CA had exposure but only some in the ITT sample had exposure, as some patients left prior to starting that portion of therapy.

Only three studies reported on therapeutic alliance. Of those, only two ($k = 5$) were measured in such a way that would have allowed for them to be assessed in a meta-regression. Therefore, more studies need to include some measure of therapeutic alliance if it is to be tested for it importance. The same is true of quality of life. In future meta-analyses, the relationship between both variables (therapeutic alliance and quality of life) and clinical improvement should be assessed.

A further issue is that several studies could not be included in this analysis because they collapsed clinical groups (e.g., PTSD and OCD) into one group, and did not give diagnosis- and condition-specific demographics. Therefore, future researchers should consider reporting their findings by specific disorders and for the different experimental conditions (e.g., treatment A vs treatment B).

Future meta-analyses that use Chambless and Hollon's (1998) criteria to define studies as efficacious or partially efficacious should use a longer time frame, in order

not to miss treatments that may be meet the criteria. Similarly, as this meta-analysis assessed the publication dates and found no difference, future meta-analyses may instead want to compare first, second, and third wave therapies.

This meta-analysis indicated that there was maintenance of treatment outcomes in efficacy studies but no such maintenance in effectiveness studies. This can be an artefact of relatively few effectiveness studies having a follow-up as compared to efficacy studies. The maths used in this study, should account for the difference in number of relevant articles, however, these techniques are not full-proof. Therefore, the results should be interrupted with caution and future meta-analyses should assess the difference between maintenance effects across efficacy and effectiveness studies. In addition, future studies can also look at the difference in follow-ups between efficacy studies and effectiveness studies, similar to how studies have previously reviewed the different in the intervention portions of both types of studies.

2.4.3. Limitations

This meta-analysis had many limitations. First and foremost were the search criteria. The criteria used, in particular the third category (see Appendix B), meant that more therapies related to CBT or behavioural therapy would be returned. This does not allow for an accurate analysis looking at the differences between various theoretical paradigms. Other methods (e.g., psychodynamic, mindfulness-based) may have had more studies than what was represented here and may or may not have a greater effect than reported.

Another limitation is the lack of routine care data. If the primary question is how well do clinicians preform in the highly controlled studies versus routine care, the use of effectiveness studies and efficacy studies does not fully address this question. However, there are very few published studies that used actuarial data from routine clinical work. Therefore, the lack of difference between efficacy and effectiveness may

not reflect the difference between highly controlled studies and the real-world. Alternatively, the result reported here may correctly reflect the lack of difference in efficacy and effectiveness studies but not address other issues within publication bias. For examples, it is possible that only studies that showed a positive effect were published. This means that studies with a trivial or null effect may have been missed in the analysis. Therefore, publication bias may obscure the amount and case of trivial or null effects.

Finally, this study did not look at adherence rates, though this was due to the various ways adherence was measured and reported. Adherence, which would be the antithesis of drift, may have moderated the outcomes more greatly than other variables looked at it. However, as there is no proper way for this meta-analysis to analyse this possibility, no conclusion as to the effects of therapist drift in the treatment of anxiety disorders in efficacy and effectiveness studies can be made.

2.4.4. Conclusion

Psychotherapies for anxiety disorders are both highly efficacious (work in highly controlled settings) and highly effective (work in real-world settings). Exposure techniques enhance the effect of therapies, and are to be recommended for wide use with anxiety disorders. Future research work is required to determine what else moderates the effect of such therapies.

Chapter 3: Plan for the rest of the dissertation

Chapter 1 of this doctoral dissertation defined anxiety and anxiety disorders, the treatments that are efficacious, the core components of those treatments, and therapist drift. The second chapter detailed how efficacious and effective psychological treatments for anxiety disorders are, demonstrating that exposure techniques result in better outcomes than other approaches (especially in the treatment of post-traumatic stress disorder). Overall, there are many effective psychological interventions for anxiety disorder, but those from the cognitive behavioural therapy (CBT) paradigm have the most evidence supporting them. Both the meta-analysis in Chapter 2 and the summary of the literature in Chapter 1 support this conclusion, alongside demonstrating that exposure is a key element in the treatment of anxiety disorders. However, as the literature suggests in Chapter 1, exposure techniques are routinely underutilized.

Having established that there are psychological treatments that successfully address anxiety disorders, the rest of this doctoral dissertation will address therapist drift in the treatment of such disorders. The first step in this is to consider the extent to which clinicians drift. To address this issue, Chapter 5 will examine how much clinicians report deviating from best practice. It is also important to consider the perspective of the client and what the client reports as occurring in therapy. Therefore, Chapter 5 will also examine the extent to which clinicians drift from best practice, based on reports from clients.

The second step in examining therapist drift is to examine the potential causes of drift. To properly address potential causes of drift, clinicians' own internal states will be examined in this dissertation. It is important to consider clinicians' attitudes towards CBT, which requires the development of a novel measure assessing clinicians' global attitudes towards CBT (instead of specific techniques). This new measure will be presented in Chapter 4.

As demonstrated in Chapter 1, other internal factors can influence the techniques clinicians employ. Therefore, clinicians' attitudes, anxiety, and self-esteem will be assessed as potential causes of drift, which will be presented in Chapter 5.

Finally, it is also important to consider how clinicians view themselves and how accurately they report on their own abilities. For this reason, self-assessment bias will be explored as a potential cause of therapist drift in the treatment of anxiety disorder. This will be addressed in Chapter 6.

Chapter 4: Development and validation of the Negative Attitudes towards CBT Scale

4.1. Introduction

There is substantial evidence that, despite its effectiveness, cognitive behavioural therapy (CBT) is used less often than would be expected (e.g., Tobin, Banker, Weisberg, & Bowers, 2007). Even when they plan to use CBT, clinicians either avoid or underutilize key techniques (Becker, Zayfert, & Anderson, 2004; Finley et al. 2015; Stobie, Tayor, Quigley, Ewing, & Salkovskis, 2007). Several emotional and behavioural factors have been shown to account for this deviation from empirically-supported treatments (EST), including clinician lack of knowledge, clinician anxiety and poor use of manuals (Becker et al., 2004; Deacon et al., 2013). However, it will also be important to understand how clinicians' attitudes to CBT interact with those emotional and behavioural factors.

There is clear evidence that many clinicians hold negative attitudes towards specific elements of EST, and that such attitudes are associated with poorer use of those elements. For example, negative attitudes to exposure therapy (Olatunji, Deacon, & Abramowitz, 2009) and negative attitudes towards therapy manuals in general (Addis, Wade, & Hatgis, 1999) are each associated with a lower likelihood of using the necessary tools. There are well-validated measures of these attitudes to specific elements of EST, such as the Therapist Beliefs about Exposure Scale (TBES; Deacon et al., 2013) and Addis & Krasnow's (2000) measure of clinicians' negative and positive attitudes to manuals. These measures confirm that negative attitudes are associated with clinicians' failure to use elements of EST (Addis & Krasnow, 2000; Deacon et al., 2013) that are commonly employed in cognitive behavioural psychology (CBT). However, such measures are limited by their focus on specific CBT tools.

Given humans' internal drive for consistency of attitudes, it is possible that such

beliefs reflect a more general pattern of attitudes towards CBT, and that it will be important and potentially simpler to measure negative attitudes to CBT as a whole than individual elements or techniques. Given the underutilization of CBT outlined above, a more general measure of attitudes towards CBT has the potential to improve the quality of services offered by clinicians. It could allow the training of clinicians to be tailored to address any inappropriately negative beliefs about CBT. Similarly, it could guide supervision, providing the supervisor with an awareness of where a supervisee needs support.

This study reports the development and validation of a measure to assess negative attitudes towards CBT – the Negative Attitudes towards CBT Scale (NACS). Its utility was tested among clinicians treating anxiety disorders. Psychometric properties (factor structure; internal consistency) were tested. The external validity of the measure was tested relative to several self-reported variables. First, external validity was tested relative to clinicians' characteristics (e.g., age, gender, anxiety, self-esteem). Second, external validity was tested relative to clinicians' reported use of specific treatment techniques (e.g., behavioural techniques), where greater negative attitudes should show a reduced use of techniques. Finally, it was hypothesized that clinicians' higher levels of anxiety and poorer self-esteem would be associated with negative attitudes.

4.2. Methods

4.2.1. Ethics

This study received ethical approval from the University of Sheffield, Department of Psychology Research Ethics Committee (see Appendix C)

4.2.2. Design

This was a cross-sectional study of mental healthcare providers working with anxious clients. The study was conducted using a survey and self-report inventories.

Data were analysed using correlational and comparative methods.

4.2.3. Participants

The sample consisted of 204 clinicians who reported that they were working with patients with anxiety disorders. A total of 1965 clinicians were approached directly to participate in this study, via two online databases and four workshops. Five hundred thirty-seven clinicians from the British Association for Behavioural and Cognitive Psychotherapies and 1286 clinicians from the British Psychological Society were approached by email to take part in the online version (see Appendix D). These clinicians were selected due to the ease of creating e-mail pools from their respective organizations and under guidance of a research supervisor. Of these, 280 clinicians started the study. Following removal of those who failed to complete the measure, 123 were included for analysis. A further 142 clinicians were approached via teaching workshops across the UK. Of those clinicians, 82 started a paper version of the measure, and 77 were eligible for analysis. Four additional responses were collected via snowball sampling methods. All four completed the survey online and were included in analysis. Thus, a total of 366 responses were collected. Of these, 204 were useable.

The mean age of the 204 participants was 45.92 years (*SD* = 10.9), and 68.1% were female. Sixty-four (31.4%) reported being clinical psychologists, 28 (13.7%) were counselling psychologists, two (1%) were psychiatrists, 30 (14.7%) were psychiatric nurses, four (2%) were clinical social workers, nine (4.4%) were licensed counsellors, 63 (30.9%) belonged to some other mental healthcare profession, and four (2%) did not report a core profession. Regarding primary theoretical orientation, 161 clinicians (78.9%) reported using CBT, six (2.9%) reported using psychodynamic/psychoanalytic approaches, two (1%) reported using a humanistic approach, five (2.5%) reported using an existential approach, and 30 (14.7%) reported using other approaches. The group's mean time qualified was 11.94 years (*SD* = 10.19). Clinicians worked on average 30.53

hours (*SD* = 12.44) a week. Regarding clinical time spent with anxious clients, clinicians reported an average of 12.47 hours (*SD* = 6.78) per week. Clinicians reported a mean of 13 sessions (*SD* = 10.91; range = 1-100) with each anxious client before treatment was complete. Regarding supervision, clinicians reported receiving 2.61 hours (*SD* = 1.92) of supervision per month, and reported supervising others on average of 5.03 hours (*SD* = 9.80) per month. Regarding session length, the most common response (n = 195) was that sessions were between 45 and 90 minutes long. Nine clinicians reported session lengths under 45 minutes (none of whom were psychiatrists), and none reported sessions of over 90 minutes. Considering clinicians who reported session lengths under 45-minutes, two (22.2%) were clinical psychologists, one (11.1%) was a counselling psychologist, 1 (11.1%) was a licensed professional counsellor, and four (44.4%) belong to some other profession (two of whom reported being CBT therapists, one postdoctoral fellow – in clinical psychology – and one chartered physiotherapist).

4.2.4. Measures and Procedure

Participants were given an information sheet about the study (see Appendix E). After giving consent (see Appendix F), each participant completed self-report measures of demographic details, attitudes to CBT, therapy methods used, anxiety, and self-esteem (see Appendix G). Responses were included for analysis if participants completed the Negative Attitudes towards CBT Scale (NACS). Any answers given as a range were averaged (e.g., '2-3' was treated as '2.5'). If a written response was unreadable, the item was treated as a missing value.

Demographics. All participants were asked to report demographic information. This included details of age, gender, ethnicity, core profession, theoretical orientation, professional accreditation, hours worked per week, hours spent with clients per week, hours spent in supervision (given or receiving), and average session length (i.e., 'under

45 minutes', '45-90 minutes', or '90 minutes or longer').

Negative Attitudes towards CBT Scale (NACS). The NACS was developed for this study. The participants completed 20 items that reflect negative attitudes to CBT (see items in Table 4.2 and Appendix G). Those items were identified from the literature and from clinician and patient online discussion forums. Each item is rated on a 1-7 scale, with higher scores reflecting more negative attitudes to CBT (1 = strongly disagree; 4 = neither agree or disagree; 7 = strongly agree). The NACS's preliminary psychometric properties are addressed in this paper.

Therapy Methods Questionnaire. This questionnaire consists of 26 therapy techniques, which clinicians rated (on a 0-100% scale) for how often they used them in clinical work with anxiety disorders (0% = never used, 50% = used in half of such sessions, 100% = used in every session). They were then asked to report (on a 0-100% scale) of how confident they were in using that skill with this group of patients. This questionnaire was a designed for this study but based primarily on previous research (i.e., Stobie et al., 2007) and treatment manuals (Abramowitz et al., 2012; Clark, 2007; Clark and Beck 2010; Craske and Barlow 2008; Franklin and Foa, 2008; Kearney, 2005; Martin, 2013; Resick et al., 2008; Turk et al., 2008; Whittal and Robichaud, 2012). Table 4.1 shows how the techniques were grouped into scales (e.g., behavioural techniques, cognitive techniques, etc.) and the means and standard deviation for the frequency of use and confidence using those techniques. Each scale had an internal consistency that was in the acceptable range (Cronbach's *alpha* = .71 - .87) with the exception of the 'confidence in using psychoeducation and general CBT techniques' scale (*alpha* = .59), suggesting that any results related to this scale should be interpreted with caution.

Table 4.1. Mean levels of use of and confidence in using each therapy technique (grouped by subscale)

Cluster	Frequency		Confidence	
Technique	Mean	*SD*	Mean	*SD*
Psychoeducation and General CBT Techniques				
Set an agenda for the session	63.05	36.14	77.41	27.61
Give the client homework	74.33	29.36	84.58	18.23
Draw diagrams explaining the problem, which link thoughts, feelings and behaviours	62.83	31.18	85.71	17.05
Draw diagrams showing the patterns your client has in relating to people	32.79	29.75	63.35	33.93
Have your client do reading on their anxiety problem	49.88	32.36	79.27	25.27
Help your client to develop new skills or to regain former skills	66.72	27.84	81.53	18.17
Overall mean for subscale	58.37	19.87	78.64	15.02
Cognitive Techniques				
Have your client keep thought records or diaries	57.51	30.30	82.94	19.63
Address the meaning attached to thoughts	71.98	26.43	83.02	18.09
Work with your client to alter interpretation of thoughts	62.85	34.10	76.87	26.86
Concentrate on anxiety-producing beliefs	64.29	28.57	80.73	19.86
Overall mean for subscale	64.19	23.76	80.87	16.11
Behavioural Techniques				
Use *in vivo* exposure techniques in your office	43.35	30.19	74.62	24.40
Use imaginal exposure techniques in your office	44.80	31.85	72.28	28.53
Have your client do exposure exercises outside the office with you present	29.64	30.64	73.14	28.46
Use flooding as a form of exposure	13.01	25.87	43.84	40.45
Use systematic desensitization as a form of exposure	46.28	34.03	70.45	32.76
Overall mean for subscale	35.33	23.13	66.67	24.08
Non-CBT Techniques				
Explore patterns of relating to people in the client's life	59.43	31.90	76.70	26.26
Use reflective listening	82.43	27.63	84.82	21.70
Offer unconditional positive regard	77.65	28.66	84.83	21.29
Explore the client's childhood, in order to understand the present better	46.46	31.28	76.60	26.95
Use silence as a therapeutic tool	27.52	29.68	59.56	36.39
Remain silent for most of the session, allowing your clients to talk freely about whatever was on their mind at the time	16.23	24.72	49.59	41.19
Focus on transference and the emotional relationship in the room	32.69	31.81	57.34	33.97
Focus on defence mechanisms	34.15	32.28	58.28	34.76
Spend time in sessions looking at problems other than the anxiety disorder itself (e.g., relationship problems)	39.69	29.30	70.25	30.15
Role-play where the client plays someone else and the therapist plays the client	24.62	25.91	63.18	32.58
Overall mean for subscale	43.96	15.38	66.05	20.72

Intolerance of Uncertainty Scale – Short form (IUS-12). The IUS-12 (Carleton, Norton, & Asmundson, 2007) is a 12-item self-report measure of intolerance of uncertainty – a core cognitive component of anxiety. It uses five-point Likert scales. It has strong psychometric properties (Carleton et al. 2007; Khawaja & Lai, 2010), and higher scores on the two subscales indicate greater levels of prospective and inhibitory anxiety. Prospective anxiety is uncertainty about future outcomes, while inhibitory anxiety reflects inaction when faced with uncertainty. For this dissertation, the global score (both scales) and each component from intolerance of uncertainty were explored. This is a trait measure of intolerance of uncertainty and not a state nor task-dependent measure.

Rosenberg Self-Esteem Scale (RSES). The RSES (Rosenberg, 1965) is a 10-item self-report measure of global self-worth. It uses four-point Likert scales, and higher scores indicate greater self-esteem. The RSES is widely used and has strong psychometric properties (Schmitt & Allik, 2005; Sinclair, Blais, Gansler, Sandberg, Bistis, & LocCicero, 2010). This is a measure of trait self-esteem rather than state or task-dependent self-esteem.

4.2.5. Data Analysis

SPSS version 22 was used for all analyses. Cronbach's *alpha* was used to determine the internal consistency of the *a priori* subsets of items that were extracted from the Therapy Methods Questionnaire (see above). Exploratory factor analysis was used to determine the factor structure of the NACS. Principal Components Analysis was used, and Direct Oblimin and Varimax rotations were also carried out to determine whether more meaningful factors emerged [9]. Items were accepted as part of a scale if they had an item loading of >.5 and if the item loading was at least .2 above the loading

[9] Additional exploratory factor analysis was run using Principal Axis Factor Analysis with no rotation and with a Direct Oblimin rotation. The factor and item loadings were the same as those found with the Principal Components Analysis reported in this paper.

on any other scale (Comrey & Lee, 1992; Tabaschnick & Fidell, 2007). The resulting scales were tested for internal consistency, using Cronbach's *alpha*. Pearson's correlations (*r*) and *t*-tests were used to determine whether clinicians' dimensional and categorical characteristics (e.g., age, gender) were associated with NACS scores. Pearson's *r* (one-tailed, where applicable) were used to determine the association between clinicians' internal factors (e.g., self-esteem and anxiety) and the NACS. Finally, multiple linear regressions were used to determine which internal states (anxiety, attitudes, self-esteem) were better predictors of technique use and confidence.

4.3. Results

4.3.1. Factor Structure of the Negative Attitudes towards CBT Scale

Table 4.2 shows results of the factor analysis of the NACS items among the 204 clinicians who completed the measure. Principal Components Analysis is reported, as Varimax and Direct Oblimin rotations did not improve on the factor structure. Based on recommendations from the literature (eigenvalue > 1 and scree analysis - Kraiser, 1960; Tabaschnick et al. 2007; Yong et al. 2013), only two factors emerged. However, the second factor consisted of only two items, and was therefore judged to be too small to be meaningful (Tabaschnick et al., 2007; Yong et al., 2013). Consequently, those two items were omitted. In addition, two other items were omitted due to not fitting either factor adequately (item loading < .5). The remaining 16 items were used to form a single scale, which had a high level of internal consistency (Cronbach's *alpha* = .95). The NACS score was the mean score on those 16 items (range = 1-7), where higher scores indicated more negative attitudes to CBT. The final measure and scoring system are given in Appendix H.

Table 4. 2. Principal Components Analysis of the Negative Attitudes towards CBT Scale (N = 204), with item mean score and internal consistency (Cronbach's alpha) of resulting scale.

	Items	Factor 1 Negative Attitudes	Factor 2 Scope of CBT
Cognitive behaviour therapy (CBT)...			
1	is too complicated	.374	**.802**
2	focuses too much on large and/or complicated psychological problems	.382	**.758**
3	is dehumanizing	**.735**	-.094
4	limits the therapist	**.789**	-.087
5	uses a one-size-fits-all approach	**.825**	-.142
6	is no more effective than using interventions that are based on my clinical expertise	**.628**	-.009
7	has conflicting research on what methods/interventions to use	.482	.251
8	asks the client to do homework that is too hard	**.702**	.068
9	is a simplified version of psychodynamic therapy	.450	.058
10	does not work as well among patients from minority groups	.**598**	.236
11	is restricted by the use of treatment manuals and protocols	**.717**	-.041
12	does not work for comorbid cases	**.778**	-.131
13	is the therapist telling the client what to do	**.752**	-.083
14	is too hard to implement in real-life settings	**.796**	.054
15	downplays emotions and over-emphasizes logical thought	**.788**	-.183
16	doesn't focus on specific disorders	**.675**	-.211
17	offers no hard evidence to support many of its claims	**.692**	-.019
18	is superficial and does not get at the underlying core problems	**.857**	-.137
19	only works for those who fit a specific profile	**.796**	-.175
20	is too stressful for clients	**.719**	.060
	Eigenvalue	9.57	-
	Variance explained	47.85%	-
	Cronbach's *alpha*	.945	-
	Item mean (*SD*)	2.35 (1.19)	-

For the purpose of establishing whether the scale would still be valid if items were missed by respondents, multiple reliability tests were run with items missing. These analyses established that any one or two items can be omitted without impacting the internal consistency of the resulting scales (Cronbach's *alpha* > .90 in all cases).

Therefore, the scoring system (see appendix H) allows up to two items to be omitted by the respondent, if the item mean is adjusted accordingly (total score/number of items completed).

4.3.2. Association of Negative Attitudes to CBT with Clinician Characteristics

Demographics. Pearson's correlations and *t*-tests were used to determine whether negative attitudes to CBT (NACS scores) were associated with demographic characteristics (age, years qualified, hours worked, clinical contact hours, average number of sessions with a client, and hours spent giving or receiving supervision). No *a priori* predictions were made about how the general individual differences (i.e., age) would influence an individual's negative attitudes towards CBT. However, it was hypothesised that clinical demographics (e.g., years qualified) might influence negative attitudes. Despite this belief, no directional prediction was made as the literature currently fluctuates on the impact of clinician demographics. Despite having no specific hypotheses around these variables, as this is exploratory work (examining potential factors that influence therapist drift), these variables were included for analysis. Whatever the therapy offered by the individual clinician, negative attitudes to CBT were associated with the clinician spending fewer hours per week with clients ($r[204] = -.218$, $P = .002$) and with the clinician spending more sessions with each client before treatment was completed ($r[191] = .153$, $P = .035$). These two findings were analysed further, for concurrent validity. Considering the time spent with clients, an ANOVA was run to see if there was an effect of theoretical orientation. No significant effect of theoretical orientation was found, $F(4, 203) = 1.03$, $P = .392$. This means there was no difference between clinicians in the amount of time spent with clients, based on their approach. Therefore, it can safely be assumed that the correlation is not influenced by theoretical approach. Considering the average number of sessions it took before completing treating an anxious client, an ANOVA was run to see if there

was an effect of theoretical orientation. There was a significant effect $F(4, 187) = 17.25$, $P < .001$. A post-hoc Bonferroni corrected *t*-test revealed that those who primarily psychodynamic approach had significantly more sessions than all other approaches ($P < .001$ in all cases). No other differences were found between any of the approaches ($P > .359$ in all cases). Table 4.3 shows the descriptive statistics for the average number of sessions across the various theoretical orientations. Given this difference, another correlation was run looking for associations between the average number of sessions and negative attitudes towards CBT, however this time psychodynamic therapists were removed. No correlation was found, $r(182) = .044$, $P = .550$. Therefore, there no actual association between negative attitudes towards CBT and the number of sessions a clinician typically has before completing therapy with an anxious client.

Table 4. 3. Descriptive statistics for number of sessions before therapy is completed

Approach	N	Mean (*SD*)	Minimum	Maximum
CBT	150	11.57 (*5.57*)	1	60
Psychodynamic	4	49.75 (*44.77*)	12	100
Humanistic	2	8.5 (*2.12*)	7	10
Existential	5	20.6 (*11.91*)	8	35
Other	27	14.41 (*13.8*)	4	80

There were no significant correlations with any other demographic characteristic ($P > .15$ in all cases). Nor was there any association of therapist gender with negative attitudes to CBT (*t*-test; $t = 1.06$, $P = .786$).

Theoretical orientation. The therapists were divided into those who described their work as CBT-based ($n = 161$) and all others ($n = 43$). The CBT therapists had a

mean NACS score of 1.97 (*SD* = .87), while the non-CBT therapists had a mean score of 3.90 (*SD* = 1.1). An independent-samples *t*-test showed that the non-CBT clinicians held more negative attitudes towards CBT than the CBT clinicians (*t*[202] = 11.6, *P* < .001).

Clinicians' internal states. Pearson's correlations were used to determine whether negative attitudes to CBT (NACS scores) were associated with the clinicians' levels of anxiety (IUS scores; prospective anxiety *M* = 12.83, *SD* = 4.11; inhibitory anxiety *M* = 8.18, *SD* = 3.01) and self-esteem (RSES scores; *M* = 32.55, *SD* = 4.90). Prospective anxiety was positively associated with NACS scores (*r* = .128, *n* = 202, one-tailed *P* = .034). However, neither inhibitory anxiety or RSES scores correlated significantly with NACS scores (IUS Inhibitory anxiety: *r* = .045, *P* = .52; RSES: *r* = -.081, *P* = .25).

4.3.3. Associations between internal states and techniques

Multiple linear regressions were used to determine whether attitudes (NACS scores) or other internal traits (i.e., anxiety and self-esteem) predicted technique use. Table 4.3 shows the associations between clinician internal traits and each cluster of technique types.

Considering the clinicians' reported use of the different types of technique, there were two patterns of association. First, more negative attitudes towards CBT (i.e., higher scores on the NACS) predicted less frequent use of psychoeducation and cognitive techniques. In contrast, higher levels of clinician anxiety predicted lower use of behavioural techniques.

The pattern of findings relating to confidence in using CBT methods was different. Table 4.4 shows that both high self-esteem and low anxiety were strongly associated with clinicians having greater confidence in using all techniques (CBT or non-CBT). Negative attitudes towards CBT (NACS score) were only predictive of

greater confidence in using non-CBT techniques.

Table 4. 4. Associations between clinicians' internal states (anxiety, attitudes, self-esteem) and techniques (use and confidence).

Dependent variable	Overall effect		Independent variable	*T*	*P*	*Beta*
	F	% variance explained				
Use of techniques						
All CBT techniques	14.01***	17.1	NACS	6.2	.001	-.413
Psychoeducation and general CBT techniques	17.97***	21.0	NACS	7.16	.001	-.462
Cognitive techniques	8.45***	10.3	NACS	4.98	.001	-.341
Behavioural techniques	4.31**	4.9	IUS	2.22	.028	-.180
Non-CBT techniques	3.98**	4.5	NACS	2.03	.044	.145
Confidence using techniques						
All CBT techniques	12.44***	15.8	IUS	2.61	.010	-.202
			RSES	3.40	.001	.263
Psychoeducation and general CBT techniques	9.22***	11.5	IUS	2.18	.030	-.172
			RSES	2.81	.006	.220
Cognitive techniques	4.92**	5.80	RSES	2.53	.012	.204
Behavioural techniques	10.38***	13.2	IUS	2.78	.006	-.219
			RSES	2.77	.006	.217
Non-CBT techniques	14.48***	18.2	IUS	2.26	.025	-.174
			NACS	3.22	.002	.217
			RSES	3.85	> .001	.296

Note: IUS = total scores on the Intolerance to Uncertainty scale. NACs = scores on the Negative Attitudes towards CBT scale. RSES = scores on the Rosenberg Self-Esteem Scale.
* $P < .05$ (2-tailed), ** $P < .01$ (2- tailed), *** $P < .001$ (2-tailed)

4.4. Discussion

This study has developed a measure to assess clinicians' attitudes towards CBT. Clinicians treating anxiety disorders were asked to complete the measure (the NACS) and reported on the therapy techniques that they used. The NACS had a single factor, with strong internal consistency. Validation included testing associations with clinicians' characteristics and with their reported use of CBT and non-CBT techniques. Clinicians who reported CBT as their primary theoretical orientation reported less negative attitudes towards CBT than clinicians who reported using other approaches, while clinicians' prospective anxiety was associated with negative attitudes to CBT. More time spent with patients overall and fewer sessions offered to patients were also correlated with less negative attitudes to CBT.

Attitudes to CBT and emotional factors appeared to play different roles in clinicians' implementation of CBT and non-CBT techniques. Negative attitudes to CBT were associated with less frequent use of general/psychoeducational and cognitive methods, while anxiety (intolerance of uncertainty) was associated with lower use of behavioural methods. In contrast, confidence in using CBT methods was more consistently associated with low anxiety and positive self-esteem. Confidence using non-CBT methods was associated with negative attitudes to CBT, low anxiety, and positive self-esteem.

Overall, these findings support and extend the conclusion (e.g., Deacon et al., 2013) that negative attitudes to CBT affect how clinicians deliver this empirically-supported therapy, taking it away from protocol. However, such attitudes need to be considered alongside other factors. A particular concern is the association of a higher level of clinician anxiety with a reduced use of behavioural CBT methods for the treatment of anxiety disorders, as has been shown elsewhere for anxiety and other disorders (e.g., Meyer, Farrell, Kemp, Blakey, & Deacon, 2014; Turner, Tatham, Lant,

Mountford, & Waller, 2014; Waller, Stringer, & Meyer, 2012). Given research into the role anxiety plays in the use of exposure techniques, it is not surprising that clinician anxiety (and not negative attitudes) is strongly associated with the less frequent delivery of behavioural techniques. Therefore, the utility of the NACS as a means of understanding the general attitudes that underpin clinicians' delivery of therapy is likely to be enhanced by combining it with measures of their emotional status (e.g., anxiety). The NACS's clinical utility might also be enhanced by combining it with measures of more technique-specific attitudes (e.g., Addis & Krasnow, 2000; Deacon et al., 2013).

Clinically, the NACS has the potential to be used in a number of ways. In supervision and training, the NACS and IUS in combination give clinicians and teachers a means of identifying likely issues with adherence to different elements of empirically-supported treatments within CBT. Such attitudes and emotional factors could be addressed through appropriate adjustments to training programmes, including didactic methods (e.g., Deacon et al., 2013) or more complex packages of educational and experiential methods (e.g., Farrell, Deacon, Dixon, & Lickel, 2013). Similarly, a focus on such attitudinal and emotional measures might help clinicians to terminate therapy at an appropriate point rather than continuing seeing patients for longer (e.g., Turner et al., 2014). Finally, the NACS and IUS might be used as means of determining whether specific training programmes are a good or poor fit for individual students.

There are a number of limitations to this study. First considering the sample, while this study attempted to include a diverse group of clinicians, the sampling sources (BABCP and BPS) are biased towards having more CBT based therapists (as the sample demographics clearly indicate). The inclusion of clinicians attending BABCP workshops might also have biased the results. These therapists would be motivated to engage in more CBT practice, as they are attending the workshops, and are likely to have negative attitudes towards CBT. This does not influence the accuracy of the factor

analysis, but may not reflect the full extent of negative attitudes towards CBT. Another potential limitation is the length of the survey used in this study. A large proportion of individuals who did not complete the study stopped when they reached the TMQ. This limitation was taken into account with the client version of the measure (see chapter 5). The length of the TMQ could have influenced the results. As participants stopped when they reached this part of the questionnaire, the results were limited due to length. This limitation may also reflect a form of self-selection bias, where more resilient clinicians took the time to fill out this survey. These limitations may have skewed the results. Another potential issue with the design of this study was the use of trait measures instead of state measures.

These findings need to be replicated and extended. Considering replication, while the data used here met test assumptions (see Results), a richer and more generalizable understanding of negative attitudes towards CBT could be determined by using a more diverse sample. Therefore, future studies may consider recruiting samples from other groups (e.g., British Association for Counselling and Psychotherapy). While this study used trait based scales (for anxiety and self-esteem), previous studies (e.g., Levita, Salas Duhne, Girling, & Waller, 2016) have used state-dependent scales or tasks. The use of trait based scales may have been potentially problematic but this study has found comparable results comparable to others (see above). Therefore, future studies may wish to see which measures (state or trait) provided more generalizable data. Also, it will be important to determine whether the NACS is useful when applied to understanding how clinicians work with other disorders (e.g., depression; psychosis), and to determine whether the NACS's utility generalises across professional groups. Such studies would be augmented by the use of real-world longitudinal methods and experimental vignette designs, each of which would give clearer evidence of the validity of the conclusion that clinicians' attitudes and emotional states have a causal impact on

their use of CBT techniques. The impact of training of clinicians might be assessed using the NACS before and after teaching sessions, to determine whether changes in attitudes to CBT result in more effective delivery of evidence-based CBT methods.

Chapter 5: Perceptions of what occurs in cognitive behavioural therapy: Two studies of clinician and client perspectives

5.1. Introduction

Anxiety disorders are amongst the most prevalent psychological disorders. It has been established that the most effective psychological treatments for anxiety disorders come from the cognitive behavioural therapy (CBT) paradigm (e.g., Bradley, Greene, Russ, Dutra, & Westen, 2005; Eddy, Dutra, Bradley, & Westen, 2004; Fedoroff & Taylor, 2001; Hofmann & Smits, 2008; Norton & Price, 2007; Otto, Pollack, & Maki 2000; Westen & Morrison, 2001). However, labelling therapy as 'CBT' does not mean that the patient actually receives effective or evidence-based CBT. If CBT is delivered inadequately or inappropriately, there is a risk of prolonged suffering for clients who receive such treatment for anxiety disorders.

Such therapist drift (Waller, 2009) can occur in the selection of treatments and in their delivery. Stobie, Taylor, Quigley, Ewing, and Salkovkis (2007) found evidence of both of these phenomena in a study of 'treatment refractory' clients suffering from obsessive-compulsive disorder (OCD). They found that 60% of the initial sample had received treatments that were less likely to be effective than the evidence base would suggest possible. Furthermore, of the 40% who were offered the most effective treatments, only 40% received a minimally acceptable dose of therapy, due to key elements being omitted. In other words, only approximately 16% of the original sample had received an evidence-based treatment. Clearly, what goes on in the therapy room is commonly suboptimal.

A number of clinician and client factors have been identified as relevant to what goes on in the therapy room. Clinicians' own internal factors (attitudes and anxiety) influence which techniques clinicians are likely to employ. These include negative

attitudes to manuals and protocols (Addis, Wade, & Hatgis, 1999; Addis & Krasnow, 2000; Becker, Zayfert, & Anderson, 2004; Deacon, et al. 2013; Olatunji, Deacon, & Abramowitz, 2009; Parker & Waller, under consideration) and clinicians' own levels of anxiety (Levita, Salas Duhne, Girling, & Waller, 2016; Parker and Waller, under consideration). Similarly, clients' perspectives influence their perceptions of how successful their therapy is (McCarthy & Frieze, 1999).

Despite these findings, to date there has been little work directly to compare clients' and clinicians' experiences of what goes on in the therapy room. Both perspectives will need to be addressed if CBT is to be delivered more effectively. Therefore, the overall aims of theses studies are: to determine what occurs in CBT treatments for anxiety disorders from each participant's perspective; and to identify potential causes to any drift that does occur.

5.2. Study 1: Clinicians' perspectives

The first step in this series of studies was to assess clinicians' perspectives of what occurs in the treatment of anxiety disorders. Therefore, the first aim of this arm of the study was to determine the quality of the CBT therapy being delivered. The second aim was to explore how clinicians' internal factors influence differences in the overall quality of delivery of CBT. The third aim was to determine whether clinician factors were associated with specific technique groups (i.e., psychoeducational and general CBT techniques, cognitive techniques, behavioural techniques, and non-CBT techniques) used in therapy.

5.3. Methods

5.3.1. Ethics

This study received ethical approval from the University of Sheffield, Department of Psychology Research Ethics Committee (see Appendix C)

5.3.2. Design

This was a cross-sectional study of mental health providers whose primary theoretical orientation was CBT and who worked with anxious clients. The study was conducted using a survey and self-report inventories. Data were analysed using correlational and comparative methods.

5.3.3. Participants

The sample consisted of 173 clinicians who reported their primary theoretical orientation as CBT and that they worked with patients with anxiety disorders. This sample is the same as in chapter 4, but only including those who endorsed that CBT was their primary modality. A total of 1965 clinicians were approached directly to participate in this study, via four workshops and two online databases. The email approaches were made to 1286 clinicians from the British Psychological Society and 537 clinicians from the British Association for Behavioural and Cognitive Psychotherapies (see Appendix D). Of those approached this way, 280 clinicians began the study. Of those, 146 did not complete enough of the measures for inclusion. Most stopped at or during the therapy methods questionnaire (TMQ). Of the remaining 134 responses, 90 reported that CBT was their primary theoretical orientation. Of those at the workshops, 82 clinicians started the paper version of the measures. All 82 responses were included in analysis. Four more clinicians were approached via snowball methods, but only one reported CBT as their primary theoretical orientation, and could be included. Thus, 173 clinicians were included in analysis. These 173 clinicians primarily used CBT and reported on their use of CBT techniques.

Sample characteristics. The mean age of the sample was 45.4 years (*SD* = 11.15), and 68.2% were female. Considering the core professions of the participants: 44 (25.4%) reported being clinical psychologists; 31 (17.9%) psychiatric nurses; 21 (12.1%) CBT therapists; 14 (8.1%) counselling psychologists; nine (5.2%) licensed

professional counsellors; five (2.9%) clinical social workers; two (1.2%) psychiatrists; and 43 (24.9%) some other mental healthcare profession. Four (2.5%) did not report their core profession.

Clinicians reported having a mean of 11.3 years of clinical experience (*SD* = 10.29). They reported working a mean of 31.0 hours working (*SD* = 11.43) per week, and spending 12.6 hours (*SD* = 6.65) face-to-face with anxious clients per week. Over a month, they reported receiving a mean of 2.65 hours (*SD* = 1.97) of supervision, and supervising others for a mean of 4.71 hours (*SD* = 8.83).

Considering their practice with anxious patients, the clinicians reported a mean of 11.5 sessions (*SD* = 5.61; range 4-60) before treatment was completed. The modal session length was 45-90 minutes (94.8%). The second most frequent session length was under 45 minutes (4.6%). The least frequent session length was greater than 90 minutes (0.6%).

5.3.4. Measures

Demographics. All participants were asked to report their general demographic details (age, gender, and ethnicity) and information about their clinical characteristics (core profession; theoretical orientation; professional accreditation; hours worked per week; hours spent with anxious clients per week; hours spent in supervision (giving and receiving) per month; average session length; and approximately how many sessions were delivered before treatment was completed).

Therapy Methods Questionnaire. The TMQ consists of 26 therapy techniques. Clinicians rated (on a 0-100% scale) how often they used those techniques in clinical practice with anxiety disorders (0% = never used, 50% = used in half of such sessions, 100% = used in every session). Table 5.1 shows how the techniques were grouped a priori (i.e., psychoeducational/general, cognitive techniques, behavioural techniques, and non-CBT techniques), and the means and standard deviations for the

frequency of use of each techniques and technique group. Previous research (Parker & Waller, under consideration; See Chapter 2) has used the same grouping of techniques, and found that they had strong internal consistency (Cronbach's *alpha* = .71 - .87).

Table 5.1. Mean levels (0 to 100) of use of each therapy technique reported by clinicians (grouped by subscale).

Cluster	Frequency	
Technique	Mean	*SD*
Psychoeducation and General CBT Techniques		
Set an agenda for the session	70.37	(33.42)
Give the client homework	80.11	(25.42)
Have your client do reading on their anxiety problem	54.08	(31.46)
Help your client to develop new skills or to regain former skills	69.95	(25.90)
Draw diagrams explaining the problem, which link thoughts, feelings and behaviours	68.30	(28.66)
Draw diagrams showing the patterns your client has in relating to people	33.70	(30.41)
Overall mean for subscale	62.79	(17.82)
Cognitive Techniques		
Have your client keep thought records or diaries	64.27	(26.62)
Concentrate on anxiety-producing beliefs	68.59	(26.55)
Address the meaning attached to thoughts	73.33	(25.46)
Work with your client to alter interpretation of thoughts	67.26	(31.98)
Overall mean for subscale	68.28	(22.03)
Behavioural Techniques		
Use imaginal exposure techniques in your office	45.27	(30.07)
Use *in vivo* exposure techniques in your office	44.51	(28.02)
Have your client do exposure exercises outside the office with you present	30.86	(30.76)
Use flooding as a form of exposure	13.25	(26.19)
Use systematic desensitization as a form of exposure	48.15	(33.94)
Overall mean for subscale	36.13	(22.03)
Non-CBT Techniques		
Explore patterns of relating to people in the client's life	56.98	(31.74)
Use reflective listening	83.14	(27.20)
Offer unconditional positive regard	79.07	(27.45)
Explore the client's childhood, in order to understand the present better	45.58	(31.04)
Use silence as a therapeutic tool	26.33	(27.40)
Remain silent for most of the session, allowing your clients to talk freely about whatever was on their mind at the time	14.07	(22.77)
Focus on transference and the emotional relationship in the room	28.19	(29.77)
Focus on defence mechanisms	31.08	(32.07)
Spend time in sessions looking at problems other than the anxiety disorder itself (e.g., relationship problems)	35.67	(27.16)
Role-play where the client plays someone else and the therapist plays the client	25.91	(26.22)
Overall mean for subscale	46.41	(14.66)

Intolerance of Uncertainty Scale – Short Form (IUS-12). The IUS-12 (Carleton, Norton, & Asmundson, 2007) is a 12-item self-report measure of intolerance of uncertainty with two subscales – inhibitory anxiety and prospective anxiety. Intolerance of uncertainty is a core component of anxiety. The measure has strong psychometric properties and has been used in a range of studies (Carleton et al. 2007; Khawaja & Lai, 2010). Higher scores indicate greater levels of anxiety.

Rosenberg Self-Esteem Scale (RSES). The RSES (Rosenberg, 1965) is a 10-item self-report measure of global self-worth. The RSES has strong psychometric properties (Schmitt & Allik, 2005; Sinclair, Blais, Gansler, Sandberg, Bistis, & LocCicero, 2010). Higher scores indicate greater self-esteem.

Negative Attitudes towards CBT Scale (NACS). The NACS (Parker & Waller., under consideration) is a 16-item self-report of clinicians' negative attitudes to CBT. The NACS has a single scale, with strong internal consistency and validity. Higher scores indicate more negative attitudes towards CBT.

5.3.5. Procedures

Participants were given an information sheet about the study (see Appendix E). After giving consent (see Appendix F), each participant completed self-report measures of demographic details, which therapy methods they employed, anxiety, self-esteem, and negative attitudes towards CBT (see Appendix G). Responses were included for analysis if participants reported on therapy methods employed. Any answers given as a range were averaged (e.g., '2-3' was treated as 2.5). If a written response was unreadable, the item was treated as having a missing value.

Grouping of clinicians. Regarding the first aim of the study, clinicians' reported use of techniques was assessed using the criteria presented in Table 5.2. Clinicians were allocated by the researchers to one of three 'delivery standard groups' - 'textbook delivery of CBT', 'CBT-lite', or 'CBT absent'. The techniques listed in

Table 5.2 were selected because they are primarily used in the treatment of anxiety disorders (Abramowitz, Taylor, McKay, 2012; Clark 2007; Clark & Beck, 2010; Craske & Barlow, 2008; Franklin & Foa, 2008; Kearney 2005; Martin, 2013; Resick, Monson, & Rizvi, 2008; Turk, Heimberg, & Magee 2008; Whittal & Robichaud, 2012). The requisite levels for each technique were based on how often those manuals called for that technique to be used. The levels were set *a priori* and were based on the manual listed above, though the figures were reduced slightly to be more generous towards clinicians. Clinicians were not expected to use every technique; only techniques common across all protocols (e.g., agenda setting) were required for all clinicians. Though concentrating on anxiety-producing beliefs is not from a manual, this item represents the core purpose of the cognitive techniques and therefore was included and given a larger loading to reflect its importance in therapy.

Table 5.2. Inclusion criteria for allocation to groups.

Technique	**Textbook delivery of CBT** (% of sessions technique is used in)	**CBT-lite** (% of sessions technique is used in)	**CBT absent** (% of sessions technique is used in)
Average session length:	45 minutes or longer	45 minutes or longer	Less than 45 minutes
Psychoeducation/General CBT	(1) Achieve criteria for the first four techniques and (2) criterion for at least one of the last two		
Set an agenda for the session	$\geq$ 90%	$\geq$ 50%	< 50%
Give the client homework	$\geq$ 75%	$\geq$ 25%	< 25%
Have your client do reading on their anxiety problem	$\geq$ 10%	$\geq$ 5%	< 5%
Help your client to develop new skills or regain former skills	$\geq$ 30%	$\geq$ 15%	< 15%
Draw diagrams explaining the problem, which link thoughts, feelings, and behaviours	$\geq$ 10%	$\geq$ 10%	< 10%
Draw diagrams showing the patterns your client has in relating to people	$\geq$ 10%	$\geq$ 10%	< 10%
Cognitive Techniques	Achieve criteria for the first two techniques and criterion for at least one of the last two	Achieve criterion for any of the following	
Have your client keep thought records or diaries	$\geq$ 10%	$\geq$ 10%	< 10%
Concentrate on anxiety-producing beliefs	$\geq$ 75%	$\geq$ 50%	< 50%

Technique	Textbook delivery of CBT (% of sessions technique is used in)	CBT-lite (% of sessions technique is used in)	CBT absent (% of sessions technique is used in)
Address the meaning attached to thoughts	≥ 50%	≥ 25%	< 25%
Work with your client to alter interpretation of thoughts	≥ 50%	≥ 25%	< 25%
Behavioural Techniques	Achieve criterion for any of the following		
Use imaginal exposure techniques in your office	≥ 75%	≥ 50%	< 50%
Use *in vivo* exposure techniques in your office	≥ 50%	≥ 25%	< 25%
Have your client do exposure exercises outside the office with you present	≥ 40%	≥ 20%	< 20%
Use flooding as a form of exposure	≥ 15%	≥ 10%	< 10%
Use systematic desensitization as a form of exposure	≥ 75%	≥ 50%	< 50%

5.3.6. Data analysis

SPSS version 22 was used throughout. Regarding the first aim, descriptive statistics were used to determine which delivery standard group clinicians were allocated to (criteria described above).

Regarding the second aim, chi-squared analysis was used to assess the association between gender and which delivery standard group clinicians were allocated to. Chi-squared analysis was also used to assess the association between profession and which CBT group clinicians were allocated to (for all analyses related to profession, professions with fewer than 10 members were placed in the 'other profession' group). One-way ANOVAS were used for the rest of the second aim, which looked at the associations between which delivery standard group clinicians were allocated to (see above) and their clinical demographics (i.e., years qualified, hours worked per week, hours spent face-to-face with clients, hours spent in supervision) and internal states (i.e., intolerance of uncertainty, self-esteem, negative attitudes towards CBT). All post-hoc

tests were conducted using Bonferroni corrected *t*-tests.

The remaining tests all pertained to the third aim. First, independent samples *t*-tests were conducted to determine gender difference in frequency of use of each technique group (i.e., psychoeducational and general CBT techniques, cognitive techniques, behavioural techniques, and non-CBT techniques). One-way ANOVAs were conducted to test differences between professions in the frequency of use of each technique group. Finally, multiple linear regressions were used to examine the association of clinical demographics and internal states with the use of different technique groups.

5.4. Results

5.4.1. Delivery standards of CBT

Figure 5.1 shows the allocation of clinicians to CBT groups based on their reported frequency of use of techniques. A total of 17.3% of clinicians were allocated to the textbook delivery of CBT group, 41.0% of clinicians were allocated to the CBT-lite group, and the remaining 41.6% failed to meet inclusion criteria for either group and thus were allocated to the CBT-absent group.

Considering those listed in the CBT-absent group, three clinicians (4.17%) reported their average session length was under 45 minutes; five clinicians (6.94%) failed to meet inclusion criteria for all three technique groups (e.g., behavioural techniques); six clinicians (8.33%) did not meet criteria for psychoeducational and general CBT techniques and for behavioural techniques; 44 clinicians (61.11%) were allocated to CBT absent as they did not meet the criteria for psychoeducational and general CBT techniques; and 14 clinicians (19.44%) did not meet criteria for behavioural techniques. Considering the five clinicians who did not meet criteria from all three technique clusters, one of the clinicians reported a session length longer than 90-minutes and another one reported an average session length of shorter than 45-

minutes. Four other clinicians, among the 44 who did not meet criteria for delivering a minimally acceptable amount of psychoeducational and general CBT techniques, had session lengths less than 45-minutes. Considering cognitive techniques, outside of the five clinicians (noted above), all clinicians used at least a minimally acceptable amount of cognitive techniques.

Considering clinicians who were allocated to the CBT-lite group, 28 clinicians (39.44%) did not meet inclusion for textbook delivery as they did not deliver enough psychoeducational and general CBT techniques nor enough cognitive techniques. The remaining 43 clinicians (60.56%) did not deliver enough psychoeducational and general CBT techniques. In all of these cases, none of the clinicians meet the first criterion for psychoeducational and general CBT techniques (see Table 5.2), whereas only 14 clinicians (19.72%) meet the second criterion for psychoeducational and general CBT techniques.

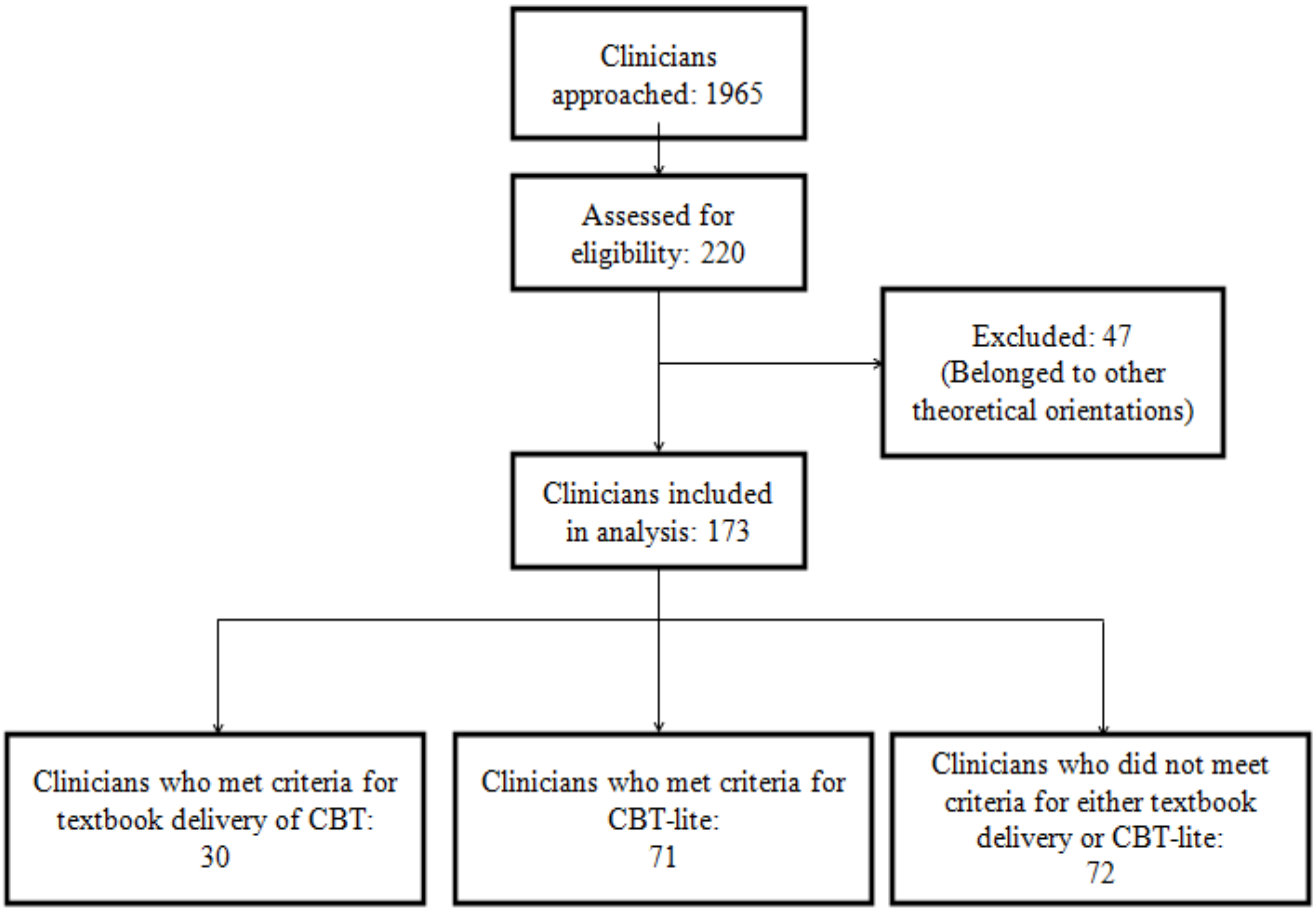

Figure 5.1. Flow-chart of researchers' allocations of clinicians based on reported technique use.

Demographics. Considering female clinicians, 25 (21.2%) met criteria for textbook delivery of CBT, 43 (36.4%) met criteria for CBT-lite, and 50 (42.4%) did not meet criteria for either category. Among male clinicians, five (9.09%) met criteria for textbook delivery of CBT, 28 (50.9%) met criteria for CBT-lite, and 22 (40%) did not meet criteria for either category. A chi-squared analysis revealed no significant association between gender and quality of delivery (χ^2 (2) = 5.13, P = .077), despite the tendency for females to be more likely to deliver 'textbook' CBT and for males to be more likely to deliver CBT-lite.

Table 5.3 shows the allocation of delivery standards by core profession. No significant association was fond between delivery standards and core profession (χ^2 (8) = 8.64, P = .373).

Table 5.3. Clinicians' quality of delivery associated with clinicians' core profession.

Profession	Quality of delivery		
	Textbook CBT *n* (%)	CBT-lite *n* (%)	CBT absent *n* (%)
Clinical psychologist	4 (9.09%)	18 (40.91%)	22 (50%)
Counselling psychologist	2 (14.29%)	8 (57.14%)	4 (28.57%)
Psychiatric nurse	8 (25.81%)	14 (45.16%)	9 (29.03%)
CBT therapist	3 (14.29%)	7 (33.33%)	11 (52.38%)
Other	13 (22.03%)	21 (35.59%)	25 (42.37%)

Table 5.4 reports on the result of one-way ANOVAS between clinician demographics and which delivery standard group they were allocated to. No demographic factor was significantly associated with the allocation of the clinicians (*p*

$\geq$ .053 in all cases).

Internal sates. Table 5.4 shows the association between clinicians' internal states and which delivery standard group they were allocated to. Clinicians who reported lower levels of prospective anxiety and lower levels of overall intolerance of uncertainty were more likely to deliver robust CBT (i.e., textbook delivery). The post-hoc tests (labelled '*MC*' in Table 5.4) were carried out using Bonferroni corrections.

Table 5.4. Clinicians' quality of delivery associated with clinicians' characteristics.

Characteristic	Quality of delivery			ANOVA		
	Textbook CBT Mean (SD; 1)	CBT-lite Mean (SD; 2)	CBT absent Mean (SD; 3)	*F*	*P*	MC
Years qualified	10.68 (9.83)	11.25 (9.30)	11.66 (11.43)	0.10	.907	-
Hours worked per week	31.86 (9.70)	32.59 (9.91)	29.20 (13.20)	1.65	.194	-
Hours spent with clients per week	15.07 (6.50)	12.63 (6.35)	11.58 (6.81)	2.99	.053	-
Hours of supervision received per month	2.65 (2.17)	2.98 (2.25)	2.34 (1.51)	1.87	.157	-
Hours of supervision given per month	4.47 (4.71)	6.01 (12.12)	3.47 (5.39)	1.45	.234	-
Self-esteem	33.38 (4.56)	31.23 (5.06)	32.53 (5.07)	2.25	.108	-
Intolerance of uncertainty (total)	18.28 (4.38)	22.09 (6.93)	22.00 (7.65)	3.59	.030	1 < 2 = 3
Prospective anxiety	11.07 (2.81)	13.37 (4.25)	13.35 (4.63)	3.56	.031	1 < 2 = 3
Inhibitory anxiety	7.21 (1.90)	8.71 (3.19)	8.64 (3.50)	2.62	.076	-
Negative Attitudes towards CBT	1.82 (0.83)	1.94 (0.87)	2.05 (0.89)	0.72	.487	-

5.4.2. Use of techniques

A repeated-measure ANOVA revealed a significant difference in the frequency with which clinicians used techniques (Wilks' *Lambda* = .459, $F(2, 160) = 94.44$, $P < .001$). Cognitive techniques ($M = 68.2$, $SD = 21.93$) were the most frequently used. General and psychoeducational techniques were used ($M = 62.50$, $SD = 17.82$) were used the second most often. Behavioural techniques ($M = 36.01$, $SD = 22.04$) were used the least. The means reported here vary slightly from those reported in Table 5.1, as missing values were excluded for the repeated measure analysis. According to a Bonferroni corrected *t*-test, there were significant differences in the frequency of delivery between all therapy techniques ($P \leq .001$ in all cases).

A series of independent *t*-tests were run to assess the association between gender and the use of each technique groups (e.g., cognitive techniques). Considering rapport and general CBT techniques, there was no significant difference between female clinicians ($M = 62.94$, $SD = 18.67$) and male clinicians ($M = 62.46$, $SD = 16.72$); $t(163) = 0.16$, $P = .874$. Considering the use of cognitive techniques, there was no significant difference between female clinicians ($M = 67.84$, $SD = 21.81$) and male clinicians ($M = 69.29$, $SD = 22.71$); $t(165) = 0.39$, $P = .696$. Considering the use of behavioural techniques, there was no significant difference between female clinicians ($M = 36.46$, $SD = 22.37$) and male clinicians ($M = 35.38$, $SD = 21.41$); $t(164) = 0.29$, $P = .772$. Regarding the use of non-CBT techniques, there was no a significant difference between female clinicians ($M = 42.91$, $SD = 15.48$) and male clinicians ($M = 41.54$, $SD = 15.44$); $t(161) = 0.52$, $P = .604$.

Table 5.5 shows the results of one-way ANOVAs assessing the association between the use of techniques and clinicians' core profession. Counselling psychologists were most likely to use behavioural techniques. There were no other such differences. The post-hoc test (labelled '*MC*' in Table 5.5) was carried out using a

Bonferroni correction.

Table 5.5. Technique clusters associated with core profession.

	Profession					ANOVA		
Technique Cluster	Counselling psychologist (1) n = 14	Psychiatric nurse (2) n = 31	Other (3) n = 59	CBT therapist (4) n = 21	Clinical psychologist (5) n = 44	*F*	*P*	MC
CBT techniques	60.66 (10.61)	60.27 (14.64)	55.76 (13.89)	52.82 (16.11)	52.12 (13.60)	2.08	.087	-
Psychoeducation/General	64.02 (13.01)	67.63 (18.74)	65.48 (17.43)	58.86 (20.19)	56.67 (17.00)	2.38	.054	-
Cognitive techniques	66.79 (21.67)	73.49 (20.52)	70.02 (21.77)	71.13 (23.62)	61.62 (22.36)	1.55	.191	-
Behavioural techniques	51.16 (23.00)	39.68 (22.52)	33.23 (20.39)	28.47 (19.33)	37.27 (22.80)	2.82	.027	1 > 3
Non-CBT techniques	50.55 (11.17)	43.88 (15.53)	40.13 (15.59)	40.87 (17.06)	44.45 (14.88)	1.51	.202	-

Table 5.6 presents the findings of multiple linear regressions examining the associations of clinicians' demographics and internal states with the use of the technique groups. Only hours spent face-to-face with clients per week significantly predicted the overall frequency of use of CBT techniques.

Table 5.6. Multiple linear regression modelling for prediction of technique use based on clinician characteristics.

Dependent variable	Overall effect		Independent variable	*t*	*P*	*Beta*
	F	% variance explained				
All CBT techniques	2.48*	9.0	Hours spent with client per week	3.62	< .001	.334
Psychoeducation and general CBT techniques	1.51	3.2	-	-	-	-
Cognitive techniques	1.49	3.1	-	-	-	-
Behavioural techniques	1.94	5.8	-	-	-	-
Non-CBT techniques	1.94	6.3	-	-	-	-

* $P < .05$

5.5. Discussion

The aims of this study were to determine the overall quality of the therapy being delivered, to account for the differences in the overall quality, and to account for the differences in the use of technique groups in the treatment of anxiety disorders.

Regarding the overall quality of the therapy, 41.6% of clinicians were allocated to the CBT-absent group, due to underutilization or absence of key techniques. Considering the second aim, clinicians who were anxious were more likely to underutilize or not use those key techniques, and to be allocated to the CBT-absent group. Additionally, counselling psychologists were more likely to use behavioural techniques. Considering the third aim, clinicians who spent more time face-to-face with their clients per week were more likely to use CBT techniques overall. However, this finding only related to the overall use of CBT techniques, not to the individual techniques. This finding needs to be explored further in future studies, potentially to rule out any chance of a Type II error. These findings broadly support the current literature (e.g., Levita et al., 2016; Stobie et al., 2007).

Overall, this study suggests that a significant proportion of CBT clinicians are not providing adequate therapy to clients suffering with anxiety disorders. However, it is not yet known whether clients will report a comparable pattern of therapy delivery and underlying factors. Therefore, the following study addresses the clients' perspective.

5.6. Study 2: Clients' perspectives

Relatively few studies have looked at what occurred in therapy from the perspective of the client. The patient's perspective is an important one to consider, as it influences their perception of how successful their therapy was. Patients' perspectives can inform researchers what they, the patients, believed happened in therapy. This information may provide additional information that leads to questions that researchers have not yet considered. When examining the patient's experience, Stobie et al. (2007) found that most clients' accounts of their therapy showed that they did not receive an adequate dose of CBT. Other studies of the patient's experience show that key elements are routinely omitted in therapies labelled as 'CBT' (e.g., Cowdrey & Waller, 2015;

Serpell et al., 2013).

Given that clinician characteristics are associated with their use of CBT (e.g., Waller & Turner, 2016), it is potentially useful to consider the patient's perspectives of their clinician, as well as what occurred in the therapy, to determine if the two are related. Therefore, the first aim of this arm of the study was to determine the quality of CBT being delivered, as reported by the patient. The second aim was to explore what factors might have caused any differences in the quality of delivery of CBT. The third aim was to assess the relationship between the perceived standard of delivery of CBT and patients' reported benefits of and harm caused by therapy, testing whether clients who reported receiving poorer quality CBT report poorer outcomes of therapy. The final aim of this study was to explore what factors might cause different technique types (e.g., cognitive techniques) to be used more or less.

5.7. Methods

5.7.1. Ethics

This study received ethical approval from the University of Sheffield, Department of Psychology Research Ethics Committee (see Appendix I).

5.7.2. Design

This was a cross-sectional study of anxious clients whose treatment was CBT. The study was conducted using a survey and self-report inventories. Data were analysed using correlational and comparative methods.

5.7.3. Participants

The sample consisted of 58 clients who reported having an anxiety disorder and having had received CBT therapy or having a therapist whose primary theoretical orientation was CBT. Participants were recruited via snowball sampling methods from anxiety support groups and a university listserv for research (see Appendix J). Fifty-three responses came from Anxiety UK. Of those, 11 did not complete the Therapy

Methods Questionnaire - Client (TMQ-C) and were not included for analysis. Of the remaining, 20 reported receiving treatment other than CBT. Thus, a total of 22 responses from Anxiety UK were included. Seven responses came from OCD Action. Of those, three did not complete the TMQ-C and one client reported receiving a treatment other than CBT. Thus, three responses from OCD Action were included. Two responses came from Social Anxiety, but neither respondent completed the TMQ-C and thus no responses from Social Anxiety were included. Regarding the listserv, this came from the University of Sheffield and was sent to students, academic staff, and support staff. A total of 127 clients responded. Of those, 41 did not complete the TMQ-C and were not included for analysis. Fifty-two of the remaining 86 responses reported receiving treatment other than CBT, and one client reported about on-going therapy and was excluded. Therefore, only 33 responses from the University of Sheffield were included. Thus, overall, 189 responses were collected, and of those 58 were included in analysis. All 58 participants purportedly received CBT.

Sample characteristics. The mean age of the sample was 32.76 (*SD* = 12.5), and most were female (86.2%). They were asked who had delivered their therapy. Six (10.3%) reported seeing a GP/family doctor; 14 (24.1%) reported seeing a psychologist; three (5.2%) reported seeing a psychiatrist; two (3.4%) reported seeing a psychiatric nurse/CPN; 15 (25.9%) reported seeing a counsellor; three (5.2%) reported seeing a psychodynamic psychotherapist; eight (13.8%) reported seeing some other mental healthcare professional; and seven (12.1%) were not certain the profession of who they saw.

Clients reported first experiencing anxiety problems at the mean age of 17.74 years (*SD* = 9.15). They reported first seeking help at the mean age of 23.86 years (*SD* = 8.48). Considering the primary diagnosis of the client at the time of treatment: one (1.7%) reported having agoraphobia with panic disorder; one (1.7%) reported having a

specific phobia; 10 (17.2%) reported having social anxiety disorder; seven (12.1%) reported having obsessive-compulsive disorder; one (1.7%) reported having post-traumatic stress disorder; 30 (51.7%) reported having generalized anxiety disorder; seven (12.1%) reported having another anxiety disorder; and one (1.7%) reported not having their anxiety disorder specified. Twenty-five (43.1%) reported having at least one comorbid disorder. Regarding comorbid diagnoses: 13 reported a diagnosis of depression; one reported a diagnosis of borderline personality disorder; three reported a diagnosis of obsessive-compulsive disorder; one had a diagnosis of social anxiety disorder; six[10] reported multiple comorbid diagnoses; and one failed clearly to report their comorbid diagnosis.

Regarding treatment, 52 (89.7%) participants reported being outpatients and six (10.3%) reported being daypatients. The mean average length of treatment was 18.16 sessions (*SD* = 20.56; range: 3-100). The modal session length was 45-90 minutes (84.5%). The second most frequent session length was under 45 minutes (15.5%). No one reported having sessions lasting greater than 90 minutes.

5.7.4. Measures

Demographics. All participants were asked to report demographic information (age, gender, ethnicity, employment status, and marital status) and information about their clinical characteristics (anxiety disorder they were treated for; comorbid disorders at time of treatment; age at which they first experienced an anxiety problem; age at which they first sought help for an anxiety disorder; if the treatment's focus was on their anxiety problems; age at which the treatment they were reporting on; average session length; and how many sessions were delivered before treatment was completed). These

[10] One client reported having Asperger's disorder and obsessive-compulsive disorder; one reported having depression and specific phobia; one reported having obsessive-compulsive personality disorder and generalized anxiety disorder; two reported having obsessive-compulsive disorder and depression; and one reported having depression and generalized anxiety disorder

items on patient demographics were included as clinicians have suggested that certain techniques work for certain client groups. While these items do not cover all possible client factors, they represent some that have appeared in the literature (e.g., Olantunji, Deacon, & Abramowitz, 2009) and therefore could potentially influence which techniques were used.

Therapy methods questionnaire – client. The TMQ-C consists of 31 therapy techniques, written for clients to understand. Clients rated (on a 0-100% scale) how often they received those techniques in their last completed treatment for their anxiety disorder (0% = never used, 50% = used in half of such sessions, 100% = used in every session). Table 5.7 shows how the techniques were grouped into a prioi clusters (as they were with the TMQ for clinicians), and the means and standard deviations for the frequency of use of those techniques and clusters.

Table 5.7. Mean level (0 to 100) of use of each therapy technique reported by clients (grouped by subscale).

Cluster	Frequency	
Technique	Mean	*SD*
Psychoeducation and General CBT Techniques		
Set an agenda for the session	59.26	(41.00)
Gave you homework to do between sessions	79.79	(32.51)
Draw diagrams explaining the problem, which link thoughts, feelings and behaviours	43.90	(33.47)
Draw diagrams showing the patterns you had in relating to people	19.84	(27.96)
Have you do reading on their anxiety problem	29.02	(32.48)
Help you develop new skills or regain former skills	36.89	(34.33)
Overall mean for subscale	44.71	(19.83)
Cognitive Techniques		
Have you keep thought record or diary	49.35	(34.40)
Talk about the meaning of your thoughts	47.63	(34.88)
Work on changing the meaning attached to your thoughts	61.14	(36.38)
Concentrate on anxiety-producing beliefs	66.05	(32.59)
Overall mean for subscale	56.04	(24.33)
Behavioural Techniques		
Have you interact with or be around things that you feared while in your therapist's office	8.42	(18.73)
Have you face your anxieties by imagining them, while still in your therapist's office	19.27	(28.63)
Have you interact with or be around things you feared, outside of your therapist's office but with your therapist present	5.09	(18.65)
Have you undertake a session where you were exposed to something that you	4.91	(13.18)

fear all at once		
Expose you to the thing that you most feared, by building up to it slowly over the sessions or over several sessions	20.45	(32.19)
Have you relive past traumatic experience by speaking aloud (in the present) about the experiences	14.42	(24.69)
Overall mean for subscale	12.09	(12.76)
Non-CBT Techniques		
Explore patterns you had of relating to people in your life	41.72	(32.20)
Explore your childhood with you, in order to understand the present better	26.68	(29.97)
Remain silent even if you were not talking	22.54	(30.61)
Remain silent for most of the session, allowing you to talk freely about whatever was on your mind at the time	28.82	(28.84)
Spend time in sessions looking at problems other than your anxiety disorder (e.g., relationship problems)	24.91	(27.52)
Role-play where you played someone else and the therapist played you	3.02	(7.54)
Overall mean for subscale	24.62	(16.19)

Each therapy methods technique scale had poor to questionable reliability (Cronbach's *alpha* .52 - .66), with behavioural techniques having the weakest internal consistency. No scale except the cognitive technique scale benefited enough from removal of individual items to raise the alpha to a satisfactory level. Removing the question regarding thought records/diaries would have raised the internal consistency from .67 (questionable) to .82 (good). This poor level of internal consistency overall suggests that the patients' experience of therapy had not been based on work that had clear patterns of technique use. This poor level of internal consistency may be due to poor recall or failure to understand the items in the TMQ-C.

Therapy outcomes. Participants were asked to report general information on the outcome of treatment: how did therapy end (i.e. completed treatment, stopped attending before completion, therapist left/transferred client, or other); and how long ago therapy ended. Participants were also asked to report on the impact therapy had on their anxiety: how beneficial they found treatment; how harmful they found treatment; and if they believed they had recovered as a result of treatment.

Perceptions of therapists. Participants were asked to complete an 8-item scale

on their therapist's demeanour, rating each item on a 7-point Likert scale (1 = not characteristic of their therapist; 4 = neutral/no opinion; 7 = completely characteristic of their therapist). Clients were asked if their therapist seemed: anxious, reliable, professional, competent, bored, angry, firm, and happy. They were also asked to rate on a 7-point Likert scale how much they liked their therapist at the start of therapy (1 = completely disliked; 4 = neutral; 7 = completely liked). Using the same scale, they were asked how much their therapist at the end of therapy.

5.7.5. Procedures

Participants were given an information sheet (see Appendix K) and asked to provide informed consent (see Appendix L). Participants were instructed to report only on completed treatments and not on-going treatments. Each participant completed self-report of demographic details, which therapy methods they received, their perceptions of the outcome of treatment, and their perceptions of their therapists' demeanours. Responses were included for analysis if participants reported on therapy methods employed (see Appendix M). Any answers given as an approximation (e.g., 'approx. 60 sessions') was treated as the number provided (in this case, 60).

Delivery standard group, rated by clients. Regarding the first aim of the study, what clients reported as receiving in treatment were assessed using the criteria presented in Table 5.8. Clients were allocated by researchers to having received either textbook delivery of CBT, CBT-lite, or CBT absent. The rational for these criteria are the same as those for the clinician arm of the study.

Table 5.8. Inclusion criteria for allocation to groups.

Technique	Textbook delivery of CBT (% of sessions technique is used in)	CBT-lite (% of sessions technique is used in)	CBT absent (% of sessions technique is used in)
Average session Length:	45 minutes or longer	45 minutes or longer	Less than 45 minutes
Psychoeducation/General CBT	Achieve criteria for the first four techniques and criterion for at least one of the last two		
Set an agenda (planned with you what was going to happen in the session)	≥ 90%	≥ 50%	< 50%
Give you homework to do between sessions	≥ 75%	≥ 25%	< 25%
Have you do reading on your anxiety problem	≥ 10%	≥ 5%	< 5%
Help you develop new skills or regain former skills	≥ 30%	≥ 15%	< 15%
Draw diagrams explaining the problem, which linked thoughts, feelings, and behaviours	≥ 10%	≥ 10%	< 10%
Draw diagrams showing the patterns you had in relating to people	≥ 10%	≥ 10%	< 10%
Cognitive Techniques	Achieve criteria for the first two techniques and criterion for at least one of the last two	Achieve criterion for any of the following	
Have you keep a thought record or diary	≥ 10%	≥ 10%	< 10%
Concentrate on anxiety-producing beliefs	≥ 75%	≥ 50%	< 50%
Talk about the meaning of your thoughts	≥ 50%	≥ 25%	< 25%
Work on changing the meaning attached to your thoughts	≥ 50%	≥ 25%	< 25%
Behavioural Techniques	Achieve criterion for any of the following		
Have you face your anxieties by imagining them, while still in your therapist's office	≥ 75%	≥ 50%	< 50%
Have you interact with or be around things you feared, outside of your therapist's office but with your therapist present	≥ 40%	≥ 20%	< 20%
Have you undertake a session where you were exposed to something that you feared all at once (rather than building up to it slowly)	≥ 15%	≥ 10%	< 10%
Expose you to the thing that you most feared, by building up to it slowly over the session or over several sessions (rather than all at once)	≥ 75%	≥ 50%	<50%
Have you relive past traumatic experience by speaking aloud (in the present) about the experience	≥ 75%	≥ 50%	< 50%

5.7.6. Data analysis

SPSS version 22 was used throughout. Regarding the first aim, descriptive statistics were used to determine which delivery standard group clinicians were allocated to (criteria described above).

Regarding the second aim, one-way ANOVAs were used to test the association between continuous demographics (i.e., age at which a participant first experienced anxiety issues and the age at which they first sought help) and which CBT delivery standard group a client was allocated to. From this point on, those who received textbook delivery of CBT (n = 3) and CBT-lite (n= 4), were combined into one group, given the low numbers in the groups that received at least minimally acceptable CBT. The relationship between clinicians' demeanours and group allocation was examined using Mann-Whitney *U* tests.

Regarding the third aim, a one-tailed t-test was used to determine if clients who received at least minimally acceptable CBT reported greater benefits than those who did not. Likewise, a one-tailed Mann-Whitney *U* test was use to determine if those who received at least minimally acceptable CBT reported less harm.

All other tests related to the fourth aim. A repeated-measures ANOVA with Bonferroni corrected *t*-tests (post-hoc) was used to determine which technique groups were used more often. A series of stepwise linear regressions were used to determine the association between the technique groups and clinicians' demeanours (see above).

5.8. Results

5.8.1. Delivery standards of CBT

Figure 5.2 shows the allocation of clients to CBT groups, based on the frequency of techniques that they reported receiving. A total of 5.2% of clients received textbook delivery of CBT, 6.9% of clients received CBT-lite, and the remaining 87.9% of clients received therapy that failed to meet inclusion for either group and thus were allocated to

the CBT absent group and were thus allocated to the CBT-absent group.

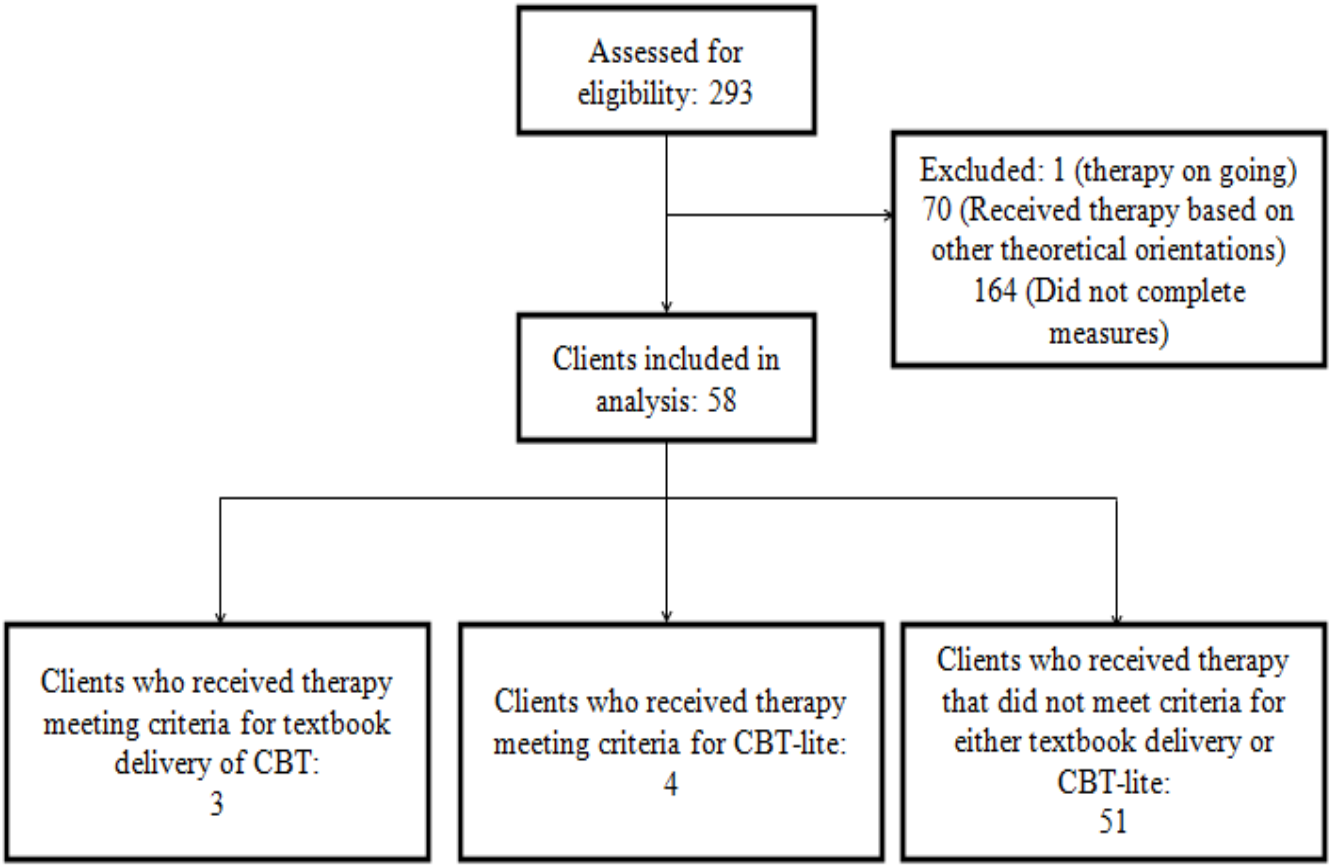

Figure 5.2. Flow-chart of researchers' allocations of clients based on reported technique used in therapy.

Demographics. Considering the age at which a client first experienced an anxiety problem and their allocation to CBT delivery standard groups, there was no difference, $F(2, 57) = .915$ $p = .406$. Likewise, there was no association between when a client first sought help and which CBT group they were allocated to, $F(2,57) = 2.07$, $p = .135$. A chi-squared analysis assessing the association between gender and the quality of the therapy received was impossible to conduct, as the sample violated several of the tests assumptions. Regarding female clients, four received textbook delivery of CBT, two received CBT-lite, and 44 were allocated to CBT-absent. Regarding male clients, zero received textbook delivery of CBT, one received CBT-lite, and six were allocated

to CBT-absent. Given these small groupings, those who received either textbook delivery of CBT or CBT-lite were grouped together (see above).

Perceptions of the clinician. Considering clients' perceptions of clinicians' demeanours, Mann-Whitney *U* tests were conducted to assess the relation between clinicians' demeanours and the quality of therapy a client received. The results of these tests are reported in table 5.9. Clinicians who appeared more competent to their client were more likely to deliver at least minimally acceptable CBT.

Table 5.9. Mann-Whitney U results comparing perception of clinician demeanours grouped by quality of delivery.

Characteristic	Grouping	Mean (*SD*)	*Z*	*P*
Anxious			1.62	.105
	CBT	1 (0)		
	CBT Absent	1.5 (.9)		
Reliable			.91	.362
	CBT	6 (1.53)		
	CBT Absent	5.6 (1.54)		
Professional			2.08	.037
	CBT	6.86 (.38)		
	CBT Absent	6.02 (1.21)		
Competent			2.07	.038
	CBT	6.83 (.41)		
	CBT Absent	5.73 (1.48)		
Bored			.46	.646
	CBT	2.29 (2.22)		
	CBT Absent	2.08 (1.65)		
Angry			.61	.540
	CBT	1.14 (.38)		
	CBT Absent	1.48 (1.09)		
Firm			.52	.601
	CBT	4.29 (1.70)		
	CBT Absent	3.94 (1.9)		
Happy			1.02	.338
	CBT	5.57 (.98)		
	CBT Absent	5 (1.38)		

Considering how likeable the client found their therapist, an independent samples *t*-test revealed that there was no significant difference in how much a client liked their clinician at the start of therapy, whether they received at least minimally acceptable

CBT (*M* = 5.0, *SD* = 1.16) or were in the CBT absent group (*M* = 5.21, *SD* = 1.18), *t*(53) = .436, *p* = .665. However, there was a significant difference between the change in how much clients liked their clinicians and if the client reported therapy as meeting criteria for at least minimally acceptable CBT (*M* = 1.29, *SD* = 1.11) versus those in the CBT absent group (*M* = 0.21, *SD* = 1.18), *t*(53) = 2.26, *p* = .028. This result indicates that clients who had received at least minimally acceptable CBT developed a more positive opinion of their clinicians by the end of therapy, which was not the case in the CBT absent group.

Benefit versus harm. Regarding how beneficial a client found therapy, an independent samples *t*-test (one-tailed), revealed a significant difference between clients in the at least minimally acceptable CBT group (*M* = 74.29, *SD* = 21.49) and those in the CBT absent group (*M* = 53.53, *SD* = 30.46), *t*(54) = 1.74, *p* = .048. Regarding how harmful clients found therapy, clients who received at least minimally acceptable CBT reported no harm (*M* = 0, *SD* = 0). As there was no variance, a Mann-Whitney *U* test (one-tailed) was used instead of a *t*-test. This test revealed that clients who were in were in the CBT absent group (*M* = 14.8, *SD* = 21.65) reported significantly more harm as a result of their therapy, *U* = 84.0 (*Z* = 2.38), *p* = .029.

5.8.2. Use of techniques

A repeated-measures ANOVA revealed a significant difference in the frequency of use of therapy techniques (Wilks' *Lambda* = .206, *F*(3, 53) = 66.82, *p* < .001). Cognitive methods (*M* = 58.58 *SD* = 24.64) were used most frequently. General and psychoeducational techniques were used second most often (*M* = 44.39, *SD* = 19.37). Non-CBT techniques were used third most often (*M* = 24.72, *SD* = 16.48). Behavioural techniques were used least often (*M* = 12.09, *SD* = 12.03, *SD* = 12.76). The means reported here vary slightly from those reported in Table 5.9, as missing values were excluded for the repeated measures analysis. According to a Bonferroni corrected *t*-test,

there were significant differences in the frequency of delivery between all therapy techniques ($p < .001$ in all cases, except between psychoeducation and general CBT techniques and cognitive techniques - $p = .010$).

The results of a series of linear (stepwise) regressions that assessed the association between perceived clinician demeanour and the reported use of the technique groups are reported in Table 5.10. In all cases, how competent a clinician seemed positively predicted reported frequency of use of each technique group.

Table 5.10. Associations between clinicians' demeanour and techniques used. (Stepwise)

Dependent Variable	Overall effect		Independent variable	*t*	*p*	*Beta*
	F	% variance explained				
Use of techniques						
All CBT techniques	13.98***	21.2	Competent	3.74	< .001	.460
Psychoeducation and general CBT techniques	7.02*	10.2	Competent	2.65	.011	.345
Cognitive techniques	4.93*	6.9	Competent	2.21	.031	.294
Behavioural techniques	10.82**	15.6	Competent	3.29	.002	.415
Non-CBT techniques	5.38*	7.7	Competent	2.32	.024	.307

* $p < .05$ (2-tailed), ** $p < .01$ (2-tailed), *** $p < .001$

5.9. Discussion

The aims of this study were to determine the overall quality of the CBT clients received, to determine possible causes for the differences that quality of delivery, to assess clients' perceptions of benefits/harm from therapy, and to determine possible causes for groups of techniques to be used more or less frequently. Considering the first aim, a majority (87.9%) of clients received therapy that did not resemble evidence-based CBT. Regarding the second aim, none of the clients' demographics were associated with the quality of CBT received. However, clinicians who were perceived as more competent and professional were more likely to deliver at least minimally acceptable CBT. Regarding the third aim, clients who received at least minimally

acceptable CBT reported more benefits than clients who did not. In contrast, clients who were in the CBT-absent group reported more harm than those who received at least minimally acceptable CBT. Considering the final aim, behavioural techniques were the least used set of techniques, and clinicians who were perceived to be more competent used more CBT techniques.

Overall, this study suggests that a significant proportion of clients who were told that they were being treated using CBT did not, in fact, receive a therapy that resembled CBT adequately. The importance of this finding lies in the fact that there was a greater reported benefit among those who did receive at least minimally acceptable CBT. Thus, both clients and clinicians report poor delivery of CBT techniques within CBT. However, it remains to be determined whether the degree of slippage is similar across the two groups, or whether their levels of reported CBT technique use differ substantially. As these are retrospective data, these interpretations must be treated with caution. For example, it is entirely possible that clients reported greater benefits in the at least minimally acceptable CBT group as they have a more positive world view, or more global high ratings across the board.

5.10. General discussion

The overall aims of these studies were to: assess what occurred in therapy; identify possible causes of therapist drift; and assess contrasting perspectives on what occurred during CBT. Regarding the first aim, when treating anxiety disorders, 58.3% of clinicians reported using CBT that was delivered at least minimally acceptable levels. In contrast, only 12.1% of clients reported receiving CBT for their anxiety disorder that was delivered to at least minimally acceptable levels. Considering the second aim, clinicians who reported higher levels of anxiety did not use behavioural techniques as often and clinicians who reported more negative attitudes towards CBT did not use psychoeducation/general CBT techniques and cognitive techniques as often. Clients

reported that clinicians who delivered minimally acceptable CBT appeared more competent and professional. Regarding the final aim, clinicians and clients reported significantly different levels of use of CBT techniques. Thus, it is clear that CBT for anxiety disorders is not being delivered adequately relative to protocols, whether one asks the patient or the therapist, but the patient's perspective is particularly negative.

Considering the relationship of these findings to the wider empirical literature, these findings broadly support the existing research on therapist drift. The finding that only 12.1% of clients received at least minimally acceptable CBT is closely comparable to previous research, which found that only 16% of clients received minimally acceptable CBT (Stobie et al. 2007). These findings also support previous research regarding the role of clinician characteristics. For example, the role of clinician anxiety in this study replicates the finding that clinicians who are anxious are less likely to use behavioural techniques, such as exposure (Meyer, Farrell, Kemp, Blakey, & Deacon., 2014; Levita et al., 2016; Turner, Tatham, Lant, Mountford, & Waller, 2014; Waller, Stringer, & Meyer., 2012). Similarly, the role of clinicians' negative attitudes to CBT is compatible with prior findings that clinicians who hold more negative attitudes to a therapeutic method are more likely to underutilize or leave out key techniques (Deacon et al., 2013). The finding that clinicians and clients report different patterns of therapeutic techniques might indicate that clinicians simply over-report their skill level (e.g., Walfish, McAlister, O'Donnel, & Lambert, 2012; Parker and Waller, 2015). Alternatively, it could be the result of poor therapist-patient communication about what is being delivered in therapy, with therapists possibly using the methods but not explaining them to the clients.

These findings are compatible with the existing theoretical literature, but also extend it. They not only confirm that therapist drift occurs, but also suggest that it might be worse than previously thought. Typically, clinician reports have been used to

assess therapist drift. However, these findings and those of other researchers (particularly Stobie et al., 2007), indicate that drift might occur more than therapists believe. The importance of this finding is that there is an association between clients developing more confidence in clinicians and the quality of therapy the client received, and an association between the benefits the client perceives and the quality of CBT received. In contrast, clients see an inadequate does of CBT as being more likely to be associated with harm. These findings emphasise the importance of attending to patient values when delivering treatment within an evidence-based practice paradigm. These findings can also mean that clients will develop more confidence in clinicians who do not engage in therapist drift and who use more effective techniques. However, as this is an association, it could be that clinician who feel that their clients believe in them are more likely to use stressful but effective techniques (e.g., exposure) and thus drift less.

The findings also support the theoretical implications of existing research. In particular, they demonstrate that clinician anxiety, attitudes and perceived competence are all associated with therapist drift. For example, these findings (that behavioural techniques, while the most important tool in treating anxiety, are underutilized according to both clients and clinicians) support the proposal that clinicians will engage in their own safety behaviours, to reduce anxiety at delivering CBT (Waller & Turner, 2016).

5.10.1 Limitations

As this study uses self-report measures, the level of use of clinical techniques has not been ascertained concretely, and further research using observational methods is needed to confirm these findings and their implications. Similarly, because these samples were independent, replication with paired samples would be valuable. Finally, some of the measures require refinement. For example, the TMQ would benefit from questions regarding graded exposure and interoceptive exposure. Similarly, perceptions

of clinicians' demeanours could be considered more widely (e.g., inclusion of characteristics such as resilience and empathy), as less competent clinicians (e.g., those who may drift more) overestimate their own empathy (Brosan, Renyold, & Moore, 2008). Another limitation may be the length of the TMQ, as noted in Chapter 4. The length of the TMQ, both the clinician and client versions, may have caused participants to stop answering. Another limitation, also noted in Chapter 4, is where the participants were recruited from. As most of the participants are from organizations that primarily support CBT use, the results may have been skewed. Future studies may benefit from using other organizations such as the British Association for Counselling and Psychotherapy or the United Kingdom Council for Psychotherapy. Likewise, the recruiting method for the client arm may have been problematic. As all patients were recruited from support groups, these may be clients who have had more negative therapy experiences than those who generally receive CBT for anxiety. These are also patients who may still be experiencing distress/psychopathology, and this could have skewed the results.

5.10.2. Future research

Having established the presence and likely prevalence of therapist drift, its costs should be considered more widely. In particular, what are its financial costs and impact on long-term suffering and quality of life? Of course, this study has focused on CBT for anxiety disorders. Such findings need to be extended to other disorders and therapies.

It would be useful to understand the developmental course of client perspectives on their therapist – do clients start with a positive or negative attitude to their therapists, or are such attitudes developed as a result of the patients' experience of therapy? For example, does pushing clients to undertake more challenging tasks (e.g., exposure) boost their confidence in their clinicians and the therapy, as might be hypothesised

given the current findings relating to client's perceptions of benefit from a more adequate version of CBT and harm from the CBT-absent variant. Similarly, does the therapist do more harm if they remain silent and allow the client to talk about whatever is on their mind? In such circumstances, the client might feel more empowered, but equally might feel lost and without guidance. Likewise, when CBT therapists engage in drift, they deviate from CBT protocols. Could it be that non-CBT clinicians drift towards CBT? Future studies may consider looking at the differences in sort of therapist drift that might occur.

While this study asked clinicians what they did during CBT with anxious clients, this study does not ask clinicians they choose to use certain techniques. As therapist drift occurs without evidence supporting their deviations, it is important that future studies take into account why clinicians make the decisions they make.

Despite the general underutilization of behavioural techniques, future studies may want to explore the use of general CBT and therapy techniques; as this was the most problematic area for clinicians (see Section 5.4.1). However, this finding may reflect an issue with the design of the criteria for group allocation.

5.10.3 Clinical implications

The findings of these studies suggest that therapist drift occurs often in the treatment of anxiety disorders, as therapist are not employing or underutilizing key techniques. This deficit needs to be addressed through training and supervision to ensure competence and adherence (Waller & Turner, 2016). For example, training for CBT clinicians could be adapted to address clinicians' anxiety and negative attitudes towards CBT (Meyer et al., 2014). Additionally, supervision could reduce therapist drift by focusing on patient outcomes. To ensure better adherence, supervision would need to ensure early identification of drift, to ensure on-going training, and to ensure that clinicians use the correct techniques. Another avenue to help reduce therapist drift

in the treatment of anxiety disorders is to have clinicians undertake psychoeducation and 'exposure for exposure therapists' (Farrell, Deacon, Dixon, & Lickel, 2013), in order to reduce clinician anxiety around the use this technique.

It can also be suggested that better communication is needed about what is going on in CBT for anxiety and why. Therapists should be prepared to discuss the aims and techniques of CBT, so that patients have a better chance of engagement and so that therapists can overcome their need to engage in their own avoidant behaviours (Waller & Turner, 2016). Finally, it is clearly important to understand and respond to patients' values and their experience of therapy, as clients make their own judgements about whether therapy is going well or poorly.

5.10.4. Conclusion

In conclusion, these studies confirm and extend the evidence that therapists are drifting from best practice in delivering CBT for anxiety disorders, and show that clients' perceptions are even less positive than those of therapists themselves. Reasons for such deviation have been identified, though they need more objective measurement in future. However, the patients report that the pattern of therapist behaviours that manifest as therapist drift is associated with poorer outcomes, even though the patients would presumably not know enough to be able to identify drift per se. For CBT to be effective, it is important that it should be delivered to a good standard. Training in such competence and monitoring of adherence are important goals, if CBT in routine practice is to offer anxious patients the best chance of benefitting.

Chapter 6: Factors related to psychotherapists' self-assessment bias when treating anxiety and other disorders

6.1. Introduction

As established in previous chapters, the most efficacious psychological treatments for anxiety disorders come from the cognitive behavioural therapy (CBT) model (see Chapter 1 or Appendix A). They have been shown to be extremely efficacious in the wider literature (Bradley, Greene, Russ, Dutra, & Westen, 2005; Butler, Chapman, Forman, & Beck, 2006) and in the meta-analysis in this dissertation (Chapter 2). Hansen, Lambert, and Forman (2002) report that over half of patients in such trials achieve recovery, while about two-thirds make clinically meaningful improvement. However, these data apply to efficacy and effectiveness studies rather than everyday clinical practice.

Despite these empirically supported treatments (ESTs) being available to clinicians, recovery and improvement rates are lower in everyday practice. At the end of therapy in such routine settings, between 40-57% of clients fail to show any change (Chilvers, et al., 2001; Hensen, Lambert, & Foreman, 2002; Westbrook & Kirk, 2005; Westbrook & Kirk 2007). In contrast, only 14-30% of clients recover and 15-30% show clinically significant improvement after therapy (Chilvers, et al., 2001; Hensen, Lambert, & Foreman, 2002; Westbrook & Kirk, 2005; Westbrook & Kirk 2007). For more details on these studies refer back to Chapter 1.

Indeed, studies of the clinical process (Miller, Hubble, Chow, & Seidel, 2013; Stobie, Taylor, Quigley, Ewing & Salkovskis, 2007) suggest that therapists are not conducting therapies accurately. This phenomenon has been termed ‘therapist drift’ (Waller, 2009), and has been related to clinicians’ own levels of anxiety and depression (e.g., Harned, Dimeff, Woodcock, & Contreras, 2013; Waller, Stringer, & Meyer,

2012). For example, novice therapists might choose not to employ exposure for agoraphobia or drift from evidence-based procedures detailed in the exposure manuals due to their own anxiety (Koch, Gloster, & Waller, 2007).

A further possible reason that clinicians fail to use evidence-based methods is that they believe that their own clinical work is already of a high standard, both in relation to other clinicians and in terms of patient outcomes. If these assumptions are present, then clinicians would perceive little reason to focus on monitoring, maintaining, and improving their skills and outcomes. This phenomenon is known as self-assessment bias, which is when an individual overestimates their own abilities. This overestimation of ability is found in a range of skills, such as driving (e.g., Anderson, Warner, & Spencer, 1984; Meyer, 1990). Recently, Walfish, McAlister, O'Donnel, and Lambert (2012) found evidence to support the hypothesis that clinicians believe their own clinical work to be already of a high standard. In a cohort of psychological therapists, the mean self-rated skill level relative to colleagues was high, with the mean rating being at the 80th centile (rather than the 50th, as should be the case). Indeed, no clinicians saw their skill level as being below the 50th centile, meaning that no-one saw themselves as being below the average level of skill. Furthermore, when asking these clinicians about how many of their patients recovered or improved, Walfish et al. (2012) found that clinicians believe that most of their clients recover after therapy. In a similar vein, Brosan, Reynolds, and Moore (2008) found that, overall, therapists' self-ratings have no more than moderate agreement with independent ratings of their competence. Furthermore, they found that less objectively competent therapists over-rated their own abilities more than competent therapists did.

This early evidence of self-assessment biases among psychological therapists (and the consequent enhanced potential for therapist drift) requires replication, but it will be equally important to elaborate on the reasons for those patterns of belief about

skill level and therapy outcomes. One possible factor is the therapist's own personality. Research on psychodynamic therapists has found that personality style can affect the outcome of psychotherapy (Heinonen, Knekt, Jääskeläinen, & Lindfors, 2014; Heinonen, Lindfors, Laaksonen, & Knekt, 2012). For example, therapists who treated mood and anxiety disorders produced faster symptom reduction in short-term therapy if they were more extroverted, whereas more neutral and cautious therapists elicited better and longer lasting results in long-term therapy. Furthermore, therapists who were less open and less extroverted had a difficult time establishing a lasting working relationship with clients. Finally, therapists' perceptions of treatment outcomes were unrelated to the outcomes reported by clients.

An alternative or additional possibility is that clinical variables are relevant to clinicians' beliefs about their ability and outcomes. Such variables are likely to include supervision and training. For example, Öst, Karlstedt, and Widén (2012) have shown that clinicians in training were able to perform at the same level as experienced clinicians as long as they received dedicated supervision. Similarly, additional post-qualification training might help clinicians to perceive their own abilities and limitations more realistically, as suggested by Brosan, Reynolds, and Moore (2006). These authors found that clinicians with additional training were more competent, but there was no comparable benefit of simple level of experience.

The first aim of this study is to replicate the work of Walfish et al. (2012), assessing at what relative level clinicians perceive their own abilities and those of their colleagues, and their judgements of how effective is the therapy that they deliver. This replication will be carried out in the UK, rather than in the US (Walfish et al., 2012). The second aim is to extend that work by determining factors that might influence this self-assessment bias, focusing on clinicians' personality traits and other clinical and demographic factors (e.g., age, supervision). There will be a particular focus on

clinicians' own levels of emotional stability, given its links to therapist drift.

6.2. Methods

6.2.1. Ethics

The University of Sheffield Psychology Department Ethics Committee approved this study (see Appendix N).

6.2.2. Design

This was a cross-sectional study of mental healthcare providers working with anxious clients. The study used a survey and self-report inventories. The data were analysed using mixed comparative and correlational methods.

6.2.3. Participants

A total of 801 mental health care providers were approached from an online database and via three workshops, and asked if they would complete this study. Six hundred twenty-eight therapists from the British Association for Behavioural and Cognitive Psychotherapies (BABCP) were emailed to ask if they would participate via an online survey (see Appendix O). Each listed themselves on the BABCP therapist list as working with anxiety disorders or trauma. Of the 628 clinicians, 124 began and 93 completed the online survey. Of the 93, five gave partial information due to a technical error (ratings related to anxiety were not recorded). One of the 93 responses was deleted at the request of participant, due to an error in completion, and that person re-took the survey. The 30 remaining non-completed responses were unusable. Two participants listed that they worked with anxiety on the BABCP website, but reported in the study that they did not in fact work with anxiety. The rest of their usable data were still recorded and included. Thus, a total of 93 responses were used from the online survey.

The remaining 173 were therapists attending training workshops, who were

asked to participate by completing a paper questionnaire. Of these 173 therapists, 103 started the study. However, one gave inadequate information, and therefore was eliminated from the study. Thus, 102 responses were used from workshops. Three participants incorrectly filled out the personality measure (discussed below), but the rest of their data were included. One gave multiple answers to the outcome scales for their general client group so those data were removed, but the rest of their answers were used. Another clinician did not report their skills and outcomes when working with a general client group, but the rest of their data were included.

Thus, a total of 227 responses were collected. Of these, 195 provided useable responses (32.8% male, 66.7% female, 0.5% preferred not to disclose). Their mean age was 46.5 years (*SD* = 9.99). Of the 195 participants, 32 reported being clinical psychologists (16.4%), 15 were counselling psychologists (7.7%), two were psychiatrists (1.0%), 47 were psychiatric nurses (24.1%), five were clinical social workers (2.6%), one was a marriage and family therapist (0.5%), 20 were licensed professional counsellors (10.3%), 72 were in another mental healthcare profession (36.9%), and one person (0.5%) did not report their profession. The mean years qualified was 11.3 (*SD* = 8.91). In terms of professional accreditation, 178 (91.3%) reported being accredited with a professional body, 14 (7.2%) reported no such accreditation, and three (1.5%) did not report their status.

6.2.4. Procedures

All participants were given information sheets about the study (see appendix P). Additionally, all participants were asked to provide informed consent (see Appendix Q).

Considering those who participated at the beginning of teaching workshops, participants were eliminated from the study if they did not provide enough information for replication of the Walfish et al. (2012) study on either the general clinical self-rating or outcome scale or on the same scales for anxious clients. All other responses were

included, though missing values were assumed where the response was not interpretable. Any answers (hours worked, hours of supervision, self-rating) that were given as a range (e.g., 5-7 hours) were averaged.

6.2.5. Measures

This study used a measure similar to Walfish et al.'s (2012) survey (see appendix R). Participants were given an information sheet and were asked for their consent before the survey (either online or as a paper version). The survey included questions related to demographics (age, gender, years qualified, profession, additional professional accreditation). Participants were then asked to report clinical details and provide details on their work. They next answered questions regarding their experience with general cases. They rated their overall clinical skills on a 0-100 scale, compared to other clinicians with similar qualification (0 = the poorest, 50 = average, 100 = the best). If they worked in a team, they were asked to rate their team's overall clinical skills on the same scale. They then repeated these items for work with anxiety-disordered patients. Therefore, clinicians reported on both working with anxious populations and general clinical population and each populations' response to therapy (e.g., did the client improve?). It was necessary to ask for clinicians' perceptions of both groups, as to ensure that there was no difference in how clinicians perceived anxious and general clinical populations. Next, the clinicians rated (on a 0-100% scale) how many of their own clients: recovered (no longer displayed symptoms and no longer needing therapy); improved (significant symptom reduction at the end of therapy, but still had some problems); stayed the same (no change following therapy); or deteriorated (significant symptom increase by the end of therapy). Again, this was done twice – once for a general clinical group and once for their work with anxiety-disordered patients. For each of these skill and outcome ratings, a flat distribution was expected.

Finally, participants were asked to complete the Ten-Item Personality Inventory (TIPI) to measure personality characteristics. The TIPI uses seven-point Likert scales to measures extraversion, agreeableness, conscientiousness, emotional stability, and openness to experiences. The TIPI uses seven-point Likert scales to report personality traits. Compared to the Five-Item Personality Inventory, the TIPI has stronger overall test-retest reliability and demonstrates stronger correlations with longer psychometric measures of person (Gosling, Rentfrow, & Swann, 2003). Other researchers have validated the TIPI (e.g., Jonason, Teicher, & Schmitt, 2011).

6.2.6. Data analysis

SPSS21 was used for all analyses. Descriptive statistics were calculated for self-ratings, perception of team skills, and outcome ratings. In relation to the first aim, chi-squared analyses were used to determine whether self-reports of skill level deviated from the expected (flat) distribution. The remaining analyses related to the second aim. First, clinical features were assessed using independent-samples *t*-tests to determine whether being accredited was related to self-ratings and outcome ratings. ANOVAs were conducted comparing professions (clinical psychologists – N = 32; counselling psychologists – N = 15; psychiatric nurses – N = 47; licensed counsellors – N = 20; others – N = 81) on self- and team-ratings and on beliefs regarding outcomes. Then, correlation analyses (Pearson's *r*) were used to determine associations between personality and the clinicians' skill and outcome ratings. Following the correlations, multiple linear regressions were used to determine the most parsimonious set of personality characteristics that were associated with clinician self-ratings of skill and patient outcomes. Finally, ANOVAs were used to compare the ratings of those clinicians who scored high or low on the TIPI emotional stability scale (> 1 SD above the mean, > 1 SD below the mean, and those in between), to determine whether clinicians' emotions play a particular role in their ratings of therapy outcomes.

6.3. Results

6.3.1. Clinicians' Ratings of Their Own and Team Members' Clinical Skills

Table 6.1 shows the clinicians' mean ratings (0-100) of their own and their teams' general skills, and the same ratings when working specifically with anxiety disorders. Clinicians reported a mean general score of 65.7 (above the expected mean of 50, but below the 80th centile reported by Walfish et al., 2012), and a similar rating of their teams' skills. These scores were also similar to those for working specifically with anxiety disorders.

Table 6.1. Clinicians' ratings of their own and team members' work.

Rating	Mean	SD	Median	Minimum	Maximum
<u>General client group</u>					
Self-Rating	65.7	14.3	65	10	100
Team-Rating	67.5	15.4	70	0	100
<u>Anxious client group</u>					
Self-Rating	66.9	15.3	70	10	100
Team-Rating	66.9	16.3	70	5	100

Table 6.2 shows the numbers of individuals whose ratings of their own and their teams' skills fell into each decile. For each skill rating, a one-sample chi-squared analysis showed that the distribution of scores deviated significantly from the hypothesised flat distribution, with a strong tendency towards participants seeing themselves and their teams as better than the average.

Figures 6.1 and 6.2 show the gross overestimation of clinical ability with general client groups and clinical client groups, respectively on the two self-rating scales. The red line on each graph represents the expected flat distribution.

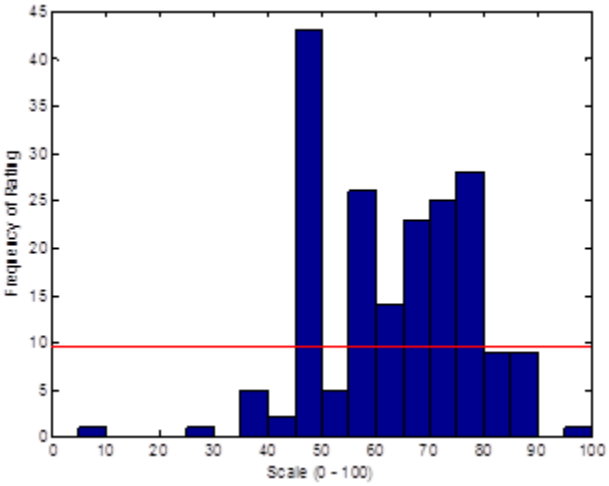

Figure 6.1. Self-rating of general clinical skills.

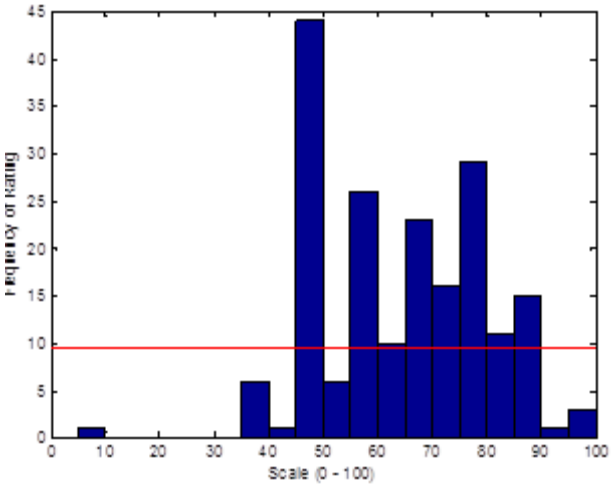

Figure 6.2. Self-rating of clinical skills working with anxiety disorders.

Table 6. 2. Deciles for self- and team-ratings.

Rating	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	X^2
General client group											
Self-Rating	1	0	1	5	45	31	37	53	37	10	271.3***
Team-Rating	1	1	0	3	22	14	26	38	10	2	112.6***
Anxious client group											
Self-Rating	1	0	0	6	45	32	33	45	26	4	180.2***
Team-Rating	2	1	0	4	19	18	26	37	5	5	124.7***

*** $P < .001$.

Association of clinicians' personality traits with their ratings of skill level. Multiple linear regressions were used to determine the most parsimonious model of how personality traits related to ratings of clinical skill level. Table 6.3 shows that three personality traits are routinely related to self-rating of skill – positive associations with emotional stability, conscientiousness, and openness. In contrast, only the participants' emotional stability was positively related to their perceptions of team skill for both clinical groups, and their agreeableness was related to the ratings of team skill when working with anxiety.

Relationship between professional accreditation and clinicians' ratings of their own and their teams' skills. The four skill ratings were each compared between clinicians with additional professional accreditation and those without it. Independent-samples t-tests showed no significant differences between those two groups on any of the ratings ($t < 1.40$ in all cases).

Association of profession with self- and team-ratings. There were no differences between the professional groups (outlined above) on self- or team-ratings. Neither ANOVA approached significance ($F < 1.0$ in both cases). Therefore, there was no evidence that any profession saw themselves or their teams as more or less skilful than the others.

Associations between temporal factors and clinicians' ratings. Considering the association of age with skill ratings, there were two reliable correlations. Older clinicians reported higher self-ratings when working with a general population ($r[183] = .263$, $P < .001$) and when working specifically with anxious patients ($r[182] = .228$, $P < .01$). An identical pattern was found regarding how long clinicians had been qualified. The longer a clinician had been qualified, the higher they rated their skills when working with a general case group ($r[185] = .273$, $P < .001$) and with anxious patients ($r[185] = .234$, $P < .001$). No other significant correlations were found for either age (*r*

< .07 in all cases) or years qualified ($r < \pm .12$ in all cases).

Table 6.3. Linear regression of personality traits on self- and team-ratings.

Dependent Variable	Overall Effect		Independent Variables			
	F	% variance explained		*t*	*P*	*Beta*
General client group						
Self-Rating	12.5***	23.3	Conscientiousness	3.32	.001	.223
			Emotional Stability	3.47	.001	.242
			Openness	3.26	.001	.217
Team-Rating	3.36**	9.2	Emotional Stability	2.78	.006	.277
Anxious client group						
Self-Rating	16.5***	29.2	Conscientiousness	4.58	< .001	.295
			Emotional Stability	4.56	< .001	.304
			Openness	2.37	.019	.152
Team-Rating	3.50**	9.8	Agreeableness	2.03	.045	.189
			Emotional Stability	2.06	.042	.201

** $P < .01$, *** $P < .001$.

Associations between supervision experience and clinicians' skill ratings. It was hypothesized that the amount of supervision given or received would correlate with clinicians' skill ratings. However, there were no significant association with supervision received, supervision given, or total supervision hours ($r < .115$ in all cases). There were also no significant correlations between hours worked and

clinicians' ratings or between hours spent with the client and clinicians' ratings ($r < \pm .170$ in all cases). These findings suggest that supervision (given, received, or total) and time spent with clients or working play no role in clinicians' self-ratings.

6.3.2. Clinicians' Ratings of Clients' Response to Therapy

Table 6.4 shows the clinicians' reported rates of their clients recovering, improving, staying the same, and deteriorating, for their general clinical population and for their clients with anxiety. There were similar outcomes for each clinical population. Clinicians rated themselves as being successful in achieving recovery in 40-50% of cases, with only 10-15% of cases remaining unchanged, and fewer than 5% reported as showing any deterioration. These findings are broadly comparable to those of Walfish et al. (2012).

Table 6.4. Clinicians' impressions of clients' responses to therapy.

	Mean	(*SD*)	Median	Minimum	Maximum
General client group					
Recover	44.7	(25.0)	45	0	100
Improve	37.1	(20.0)	30	0	90
Stay the Same	14.8	(12.9)	10	0	70
Deteriorate	4.0	(5.5)	2	0	30
Anxious client group					
Recover	48.0	(25.6)	50	0	100
Improve	36.5	(20.7)	30	0	85
Stay the Same	13.0	(12.1)	10	0	60
Deteriorate	3.5	(4.8)	1	0	30

Figures 6.3 and 6.4 show the reported outcomes for a general client group and an anxious client group respectively. Figure 6.5 shows the expected outcome figures from Henson et al. (2002) compared to the reported outcomes with regards to treating an anxious client group.

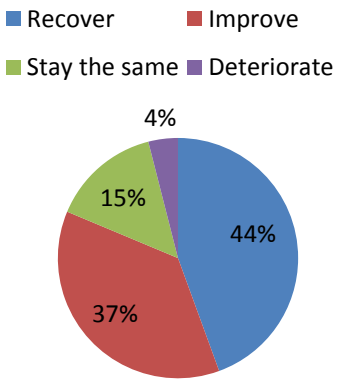

Figure 6.3. Clinicians' perceptions of general clients' responses to therapy.

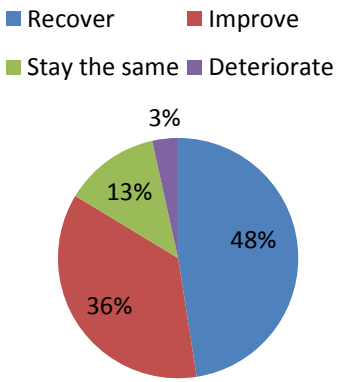

Figure 6.4. Clinicians' perceptions of anxious clients' responses to therapy.

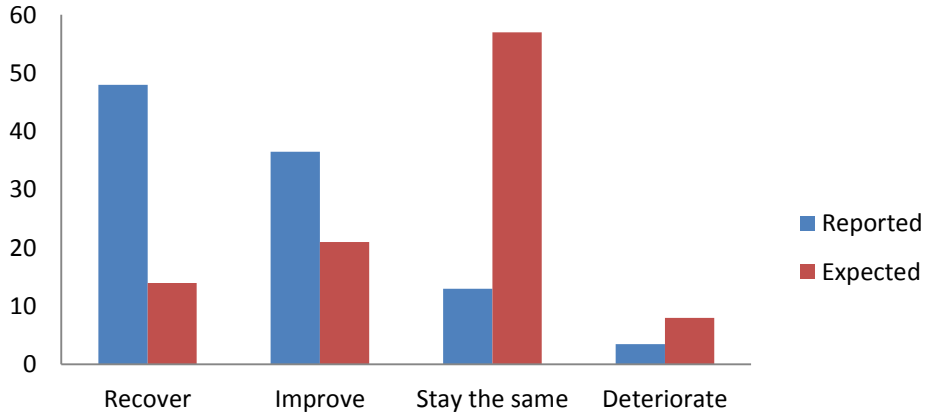

Figure 6.5. Clinicians reported outcomes with Anxious clients vs. expected outcomes.

Personality traits' relationship with clinicians' perception of therapy outcomes. Table 6.5 shows the results of multiple linear regression analyses, used to determine the most parsimonious model of personality traits that were associated with

levels of each of the perceived patient outcomes. There were associations between specific clinician characteristics (greater conscientiousness, emotional stability and openness) and their perceptions that clients were more likely to recover but less likely to stay the same. Clinicians who were more conscientious believed that fewer of their anxious clients improved as a result of therapy. In contrast, clinicians who were less conscientious reported more patients deteriorating as result of therapy.

To determine the specific role of extremes of clinician emotions, three groups (low emotional stability, normative emotional stability, and high emotional stability) were compared on their reported outcomes using ANOVAs. Table 6.6 shows that clinicians with lower levels of reported emotional stability had poorer perceptions of their therapy outcomes than others, though those levels were more akin to those reported in real life clinical settings (e.g., Chilvers et al., 2001; Hansen et al., 2002; Schindler et al., 2011; Westbrook & Kirk, 2005, 2007).

Association of supervision with clinicians' perception of therapy outcomes. It was hypothesized that the amount of supervision (given, received, or total) would correlate with perception of therapy outcome. However, no such correlations were found for supervision received, supervision given, or total supervision ($r < \pm .150$ in all cases). Likewise, there were no significant correlations between hours worked and perceived therapy outcomes, or between time spent with clients and reported therapy outcomes ($r < .150$ in all cases).

The relationship between accreditation and clinicians' perception of therapy outcomes. An independent-samples t-test showed that clinicians with additional accreditation reported higher recovery rates in their general clinical population than clinicians without additional accreditation ($M = 45.9$, $SD = 24.9$ vs $M = 26.8$, $SD = 19.1$; $t(184) = 2.71$, $P = .007$). Similar results were found for clinicians working with anxiety disorders, where clinicians with additional accreditation reported

a higher mean recovery rate than those without (M = 49.3, SD = 25.5 vs M = 31.5, SD = 21.5; $t(176) = 2.44$, $P = .016$). There was no difference between clinicians with and without additional accreditation on the other potential outcomes ($t < 1.83$ in all cases).

Table 6.5. Association between clinicians' perceptions of therapy outcome and their personality traits.

Dependent Variable	Overall Effect		Independent Variable			
	F	% variance explained		*t*	*P*	*Beta*
General client group						
Recover	7.06***	14.0	Conscientiousness	2.56	.011	.182
			Emotional Stability	2.52	.012	.186
			Openness	2.57	.011	.184
Improve	1.22	0.6	-	-	-	-
Stay the Same	9.83***	19.3	Conscientiousness	2.43	.016	-.168
			Emotional Stability	2.18	.030	-.156
			Openness	5.11	< .001	-.355
Deteriorate	3.82**	7.1	Conscientiousness	3.11	.002	-.232
Anxious client group						
Recover	7.74***	16.0	Conscientiousness	3.14	.002	.226
			Emotional Stability	2.80	.006	.208
			Openness	2.47	.015	.178
Improve	2.58*	4.3	Conscientiousness	2.66	.009	-.206
Stay the Same	9.69***	19.7	Conscientiousness	2.36	.019	-.197
			Emotional Stability	2.44	.016	-.176
			Openness	4.63	< .001	-.324
Deteriorate	3.73**	7.2	Conscientiousness	3.22	.002	-.247

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

Table 6.6. Emotional stability (ES) associated beliefs about therapy outcomes.

Variable	Low ES[1]	(SD)	Normative ES[2]	(SD)	High ES[3]	(SD)	*F*	*P*	MC
General client group									
Recover	23.3	(14.0)	41.7	(24.1)	55.5	(24.8)	8.41	<. 001	LES=NES<HES
Improve	38.8	(15.1)	39.0	(20.0)	31.4	(19.8)	2.69	.071	-
Stay the Same	31.7	(15.3)	15.8	(13.2)	10.1	(9.02)	9.71	.000	LES>NES>HES
Deteriorate	6.2	(3.2)	4.2	(5.5)	3.1	(5.5)	1.24	.292	-
Anxious client group									
Recover	27.5	(27.5)	43.6	(43.6)	63.3	(25.2)	13.6	< .001	LES=NES<HES
Improve	39.0	(10.2)	39.3	(20.7)	28.3	(19.3)	4.97	.008	NES>HES LES=NES LES=NES
Stay the Same	30.0	(7.91)	14.6	(12.5)	6.4	(6.7)	14.9	< .001	LES>NES>HES
Deteriorate	6.00	(4.18)	4.00	(5.13)	2.00	(3.28)	3.61	.029	NES>HES LES=NES LES=NES

[1] n = 7. [2] n = 138. [3] n = 50

Association of profession with perceived therapy outcomes. There were no differences between the professional groups (outlined above) on ratings of the level of the four types of clinical outcome. None of the ANOVAs approached significance (F < 1.8 in all cases). Therefore, there was no evidence that any profession believed that their clients responded to therapy any differently to the other professions.

6.4. Discussion

This study supports the earlier findings of Walfish et al. (2012), showing that clinicians appear to engage in substantial overestimation of their own and their teams'

abilities (self-assessment bias), and have unrealistic beliefs regarding client response to therapy. These erroneous beliefs are found regardless of whether clinicians are treating a general group or anxiety sufferers. High self-ratings of clinical skill and levels of client recovery were particularly associated with high levels of the personality characteristics of conscientiousness, emotional stability, and openness. This result may be due to the clinician either being more confident (potentially overly confident to the point of self-assessment bias) or due to the fact that these clinicians generally rate everything highly. Older, more experienced clinicians saw themselves as better clinicians than younger and less experienced ones, despite the evidence that clinicians' outcomes decline over the years post-qualification (Shapiro & Shapiro, 1982). However, these distortions were not consistently linked to supervision or accreditation status, and did not differ across professional groups.

Overall, these findings are similar to those of previous research showing that clinicians overestimate their abilities (Brosan et al., 2008; Walfish et al., 2012). However, the level of overestimation in this UK sample was not as high as that in Walfish et al.'s (2012) US clinician group (mean centile = 65 vs 80), suggesting some cultural differences in clinicians' self-perception. Furthermore, this sample included a small number of therapists who saw themselves as below average, which was not the case for Walfish et al. (2012). Comparison of these clinicians' patient outcome ratings with those from the wider literature (Hansen et al., 2002) indicate that therapists hold unrealistic beliefs regarding how many clients recover or improve, and substantially underestimate how many stay the same or deteriorate. As indicated by the relatively similar beliefs regarding clients' responses to therapy, clinicians see outcomes as being similar for a general clinical population and an anxious population.

Taken in combination with Walfish et al.'s (2012) findings, it is evident that psychological therapists overestimate both their individual skill level and their therapy

outcomes relative to their peers. This self-assessment bias is not unique to therapists, but occurs in many domains of human activity (e.g., Anderson et al., 1984). A potential cause of such self-assessment bias is the need to maintain a positive self-image. Self-assessment bias might be a manifestation of cognitive dissonance, whereby the individual clinician unconsciously reduces the disparity between their self-concept as a therapist and their treatment outcomes by processing the latter in a self-serving way (e.g., preferentially processing positive outcomes). This is the process of confirmatory bias, described by Lilienfeld, Ritschel, Lynn, Cautin, and Latzman (2013). A less likely but possible alternative is that that therapists are consciously misrepresenting their abilities in order to maintain their self-image or their image for others (e.g., to avoid criticism and enhance social acceptance), thus actively avoiding their own anxiety.

Self-assessment bias appears to be more extreme among clinicians with specific personality characteristics – openness, emotional stability, and conscientiousness. This link is concerning, as these are characteristics that are normally seen as positive attributes in a clinician, although there is some evidence to the contrary when examining long-term outcomes, as stated earlier (Heinonen, et al., 2012). An alternative explanation is that therapists with those personality features are actually substantially more effective than clinicians with different personality profiles. Another possibility is that those clinicians with low emotional stability who report poorer outcomes are actually demonstrating depressive realism, and that their estimates are the most accurate. These alternatives need to be explored in future actuarial outcome research, as they would have very different implications regarding the selection and training of therapists.

Regardless of the cause, an unwillingness or inability to acknowledge shortcomings could be a substantial contributor to the phenomenon of therapist drift (Waller, 2009), because it is likely to result in clinicians failing to seek the help or

guidance they need to improve their skills. If a clinician believes that they are superior to most of their peers and that most of their clients recover, they are unlikely to see the need for further development or to use key techniques or tools. This belief pattern might explain the very low uptake of protocol- and manual-based treatment methods (e.g., Addis & Krasnow, 2000), despite evidence that structured treatments enhance therapy outcomes (Cukrowicz et al., 2011). Unaware of the reality of poor therapy outcomes, clinicians are likely to continue not to address issues that could help to improve their skills and help clients.

This study had a number of limitations. First, this sample was subject to self-selection bias, as only some clinicians chose to participate. More specifically, there is the possibility that the clinicians who chose to take part actually were more skilful that those who did not, making it possible that the distribution of skill level in the current sample is an accurate reflection of their skills, rather than a distortion. Second, the study measured perceptions rather than actual outcomes, and there is a need for future research to determine whether clinicians' perceptions of their own ability and their patients' outcomes are accurate or overinflated. Finally, due to the cross-sectional design, the findings do not establish causality. Future studies extending on these findings could be integrated into training courses or program evaluations, using objective measures of clinical outcomes and examining fidelity to treatment manuals.

The role of clinician characteristics requires further consideration in such research and in clinical practice. While older and more experienced clinicians rated themselves as being more effective, those beliefs are not supported by the evidence that therapists' outcomes do not improve with experience (Brosan et al., 2006) or actually deteriorate post-qualification (Shapiro & Shapiro, 1982). Therefore, clinicians and researchers need to be aware that experience and age do necessarily equate to competence, suggesting that supervision might need to be a career-long process.

Further research is also needed to understand the relationship between clinician personality and perceived therapy outcomes. In particular, do therapists who are conscientious, open and emotionally stable actually achieve superior outcomes in clinical settings, and is low conscientiousness actually related to poorer outcomes? If so, those findings might have implications for the delivery of clinical services, either in terms of who would make effective therapists or how clinicians should be supervised.

Clinicians need to be made aware that there is a divide between perceptions and reality when it comes to therapist skills and outcomes. The findings stress the need for clinicians to use objective measurement of their outcomes, so that they know how effective they and their therapies actually are, rather than relying on their self-beliefs. Supervision that attends to such outcomes could help reduce the gulf between reality and perception, and thus help clinicians to improve their actual skills and outcomes. However, more research on supervision is needed to understand its effects on therapy. Finally, there is a need for a broad culture that stresses a clinical-scientific approach, using evidence-based and evidence-generating practice, to alleviate the problem of confirmation bias, and to reduce drift.

Chapter 7: Conclusion

7.1. Introduction

The overall aims of this doctoral dissertation were: first, to establish how well psychological interventions work in the treatment of anxiety disorders; second, to determine what moderates treatment outcomes; third, to develop a means of measuring clinicians' attitudes towards cognitive behavioural therapy (CBT); fourth, to determine the extent of therapist drift; and, finally, to determine potential causes of drift. The first two aims were addressed by reviewing the literature and conducting a meta-analysis, including moderator analyses. The third aim was addressed by developing and validating a novel measure, which contributed to addressing the fifth aim. The fourth aim was addressed by examining reports from both clients and clinicians about what occurred in therapy. The fifth aim was addressed by assessing the relationship between clinicians' internal states and their reported use of techniques, including attitudes, emotions and self-assessment bias among clinicians. Similarly, clients' perceptions of clinicians were assessed to determine other potential causes of therapist drift.

7.2. Summary of findings

Examining the evidence from Chapter 1 and the meta-analysis (Chapter 2), CBT (including treatments such as prolonged exposure) are not only highly efficacious but also highly effective in the treatment of anxiety disorders. The treatment effect is greater when the therapy involves the use of exposure-based techniques. This moderation is particularly salient in the treatment of post-traumatic stress disorder.

Considering the development of the Negative Attitudes towards CBT Scale (NACS), the one factor that emerged from factor analysis had strong internal consistency, suggesting that attitudes to CBT are homogeneous rather than involving multiple dimensions. The NACS was a strong predictor of the use of clinical

techniques, resulting in the NACS being used in assessing causes of drift (fifth aim).

Regarding the extent of drift, a large proportion of clinicians reported that they deviated from best practice. Clients also reported a significant amount of drift, above and beyond what clinicians reported. Chapter 5 also demonstrated that exposure techniques were among the least used CBT methods, despite being one of the key components to treatment (as shown in Chapter 2).

Numerous potential causes of drift were identified. These are only potential causes, as this dissertation looked at associations and therefore did not establish causal links. Clinicians' negative attitudes were associated with poorly-delivered CBT. In particular, clinicians with more negative attitudes towards CBT delivered fewer psychoeducation and general CBT techniques and were less likely to use cognitive techniques. Clinicians who had higher levels of anxiety were less likely to use exposure techniques. This pattern of drift from CBT methods is of concern, as clients saw clinicians who delivered at least minimally acceptable CBT as being more competent and more professional than clinicians who did not. A lack of communication is also a potential cause of drift. Finally, there is evidence of self-assessment bias among clinicians, which could blind therapists to their own shortcomings, resulting in therapist drift. Self-assessment bias among clinicians included the belief that an unrealistic number of clients recover as a result of therapy.

7.3. Synthesis with the existing literature

The findings of this doctoral dissertation not only confirm that therapist drift is occurring in the treatment of anxiety disorders, but suggest that therapist drift could be worse than previously believed. Clients reported more deviation from best practice than clinicians did, but clients' reports were comparable to the findings of other studies (e.g., Taylor, Quigley, Ewing, & Salkovkis, 2007).

The potential causes of drift identified in this doctoral dissertation support the broader literature. Considering clinicians' attitudes, those with more negative attitudes toward CBT were less likely to use specific CBT techniques. This finding is compatible with that of Deacon et al. (2013). The association of clinicians' anxiety with their use of exposure also broadly supports existing findings, showing that clinicians are likely to avoid exposure due to their own anxiety (Harned, Dimeff, Woodcock, & Contreras, 2013; Levita, Salas Duhne, Girling, Waller, 2016; Waller, 2009; Waller, Stringer, & Meyer, 2012). Thus, overall, the more anxious a clinician is, the less likely they are to use exposure techniques. Regarding self-assessment bias, the findings of this dissertation are similar to those of previous research (e.g., Brosan, Reynolds, & Moore, 2008; Walfish, McAlister, O'Donnel, & Lambert 2012), which demonstrate that clinicians overestimate their own abilities substantially.

7.4. Theoretical links to existing literature

This dissertation explored several potential causes of therapist drift. As suggested in Chapter 1, clinicians' own attitudes and their own levels of anxiety may influence the techniques they use. In keeping with previous research (e.g., Levita, et al., 2016; Turner, Tatham, Lant, Mountford, & Waller, 2014), this dissertation looked at clinicians' levels of tolerance of uncertainty. As with previous research (e.g., Deacon et al. 2013), this dissertation also looked at clinicians' attitudes. This dissertation extended the list of potential causes of drift by looking at another cognitive process - self-assessment bias.

The findings of this doctoral dissertation support the current literature on therapist drift, and extend that literature. The findings here establish not only that drift occurs, but also that the extent to which it occurs is much larger than initially thought. These findings require consideration in the light of the psychological theory, to understand how they fit to or extend that theory.

7.4.1. Behavioural models

Clinicians are not immune to the effect of anxiety on skill performance (Derakshan & Eysenck, 2009). As explained in Chapter 1, those experiencing higher levels of anxiety are less likely to perform at expected levels. This belief is due to various cognitive processes (see below). Therefore, it is not unexpected that clinicians who suffer from heightened anxiety perform therapy at more suboptimal levels. In terms of learning theory, this pattern could reflect either avoidance or escape-based behaviours, as described in Chapter 1. In either case, therapist drift can be conceptualised as representing a form of safety behaviour, where the clinician reduces their own or their client's anxiety in the short term by not using more challenging (but effective) methods such as exposure (avoidance), or by using them suboptimally by stopping them before they have had the chance to be effective (escape). In either the avoidance or the escape scenario, the short-term reduction in anxiety is reinforcing for the clinician and patient, but results in poorer outcomes for the patient and therapist alike, because the most effective methods are not being used.

7.4.2. Cognitive models

It is also important to consider the patterns of cognition and cognitive distortion that might underpin therapist drift. These include cognitive theories of anxiety (vulnerability- and uncertainty-based) and theories regarding self-concept.

Vulnerability and uncertainty. Clinicians who have a lower tolerance of uncertainty and higher levels of personal vulnerability are likely to behave differently when it comes to delivering different therapeutic techniques, such as exposure. As individuals with a lower tolerance of uncertainty tend to be more hypervigilant (Butler & Mathews, 1983; Krohne, 1989; Ladouceur, Gosselin, & Dugas, 2000), anxious clinicians might be more attentive to their clients' responses, and might interpret the client's response negatively even though that is not the client's own experience, or

might interpret a negative reaction as far stronger than it is from the client's perspective (i.e., magnification). Clinicians in these situations are more likely to assume that the only way in which they can respond is by reacting to their perceptions of the client's experience - for example, foregoing or underutilizing exposure based techniques.

Additionally, clinicians with lower levels of tolerance of uncertainty might also pay more attention to their own automatic arousal (Deffendbacher & Hazaleus, 1985), thus potentially increasing their own feelings of anxiety. As uncertainty and vulnerability (awareness of their own physiological arousal) increase, clinicians may begin to feel more anxious and thus more likely to avoid the use of exposure based techniques.

Cognitive biases. Clinicians, and people generally, are less likely to accept evidence that is incompatible with their image of who they are or what they believe in (Meehl, 1986). This self-concept means that clinicians who hold negative beliefs or attitudes about CBT may discount the use of proven efficacious techniques (i.e., psychoeducation and general CBT techniques; cognitive techniques), as to use those techniques would not fit with their own self-concept. Similarly, they are likely to ignore information that demonstrates that their clients are not improving or may blame the client for not improving, in order not to allow their self-concept to be challenged.

Clinicians may also experience cognitive dissonance between their self-concepts as therapists and the requirements of certain treatments. For example, exposure increases a client's distress level in session. If a clinician views their role as not to cause distress, then they may reduce this dissonance by taking a 'softer' approach. This 'nice' approach helps the clinician maintain their self-concept as a 'nice' clinician, while resulting in suboptimal treatment.

Self-assessment bias is commonly found in humans. However, in this case, it hinders clinicians from developing accurate assessments of their own abilities, by

preventing them from processing conflicting evidence. Thus, cognitive dissonance is reduced. The overestimation of skills and outcomes is likely to represent a confirmatory bias (Lilienfield, Ritschel, Lynn, Cautin, & Latzman, 2013), in which clinicians focus excessively on information that is consistent with their self-concept. Such a bias on the part of clinicians might also explain the discrepancy between clinicians and clients as to how well CBT was delivered. Clients' self-concepts are not challenged by whether or not they acknowledge that specific techniques are used in CBT, meaning that they are likely to more accurately report what has occurred in therapy. However, further research is needed to determine whether this is an accurate portrayal (see below).

Clinician cognitions. As suggested by Waller (2009), clinicians' cognitions may influence their abilities to deliver therapy adequately. As explored in Chapters 4 and 5, clinicians' beliefs influence the way in which they work, a finding supported by the broader literature (e.g., Becker et al., 2004; Deacon et al., 2013). The reason why clinicians hold these cognitions is not explored in this dissertation, but, as suggested in Chapter 5, assessing the reason behind these decisions is something that future studies should aim to do.

Considering the literature and the results in this dissertation, it may be that clinicians who hold negative attitudes towards CBT believe that CBT (or particular components of it) are unhelpful, or believe that they lack the ability to deliver the requisite technique(s), or that the client will not tolerate the use of certain technique(s). If such assumptions are present in the clinician's mind, the clinician therefore may choose not use these techniques, thus reducing their own discomfort.

If clinicians engage in this negative thinking about a technique (e.g., '*exposure is harmful'*) and therefore do not use the technique, then the clinician is ignoring an inherent logical issue. That issue is that by not using the technique they are unable to confirm or disconfirm the accuracy or validity of their potentially unhelpful idea. In

addition to this, this sort of behaviour may reduce their own self-confidence if they believe they are unable to deliver a technique, without their even attempting to deliver the technique.

7.5. Clinical implications

7.5.1. Preventing therapist drift

Given the potential magnitude of therapist drift, with at best roughly 50% of therapy sessions providing at least minimally acceptable CBT, steps need to be taken to prevent drift. This means that shortcomings in delivery of CBT need to be identified and the steps taken to resolve the issue(s) that result in a clinician delivering therapy inadequately.

Identifying drift. As with any difficulty, therapist drift needs to be identified before it can be addressed. Not only is it important to identify when a clinician deviates from best practice, it is also important to determine the function (i.e., the reason) for such deviations Identifying drift can be achieved through recording of sessions, client feedback, and supervision.

Ensure exposure is used. The evidence for exposure is strong, and yet it is hardly used in the treatment of anxiety, as demonstrated in Chapter 5 and by existing literature (e.g., Harned, Dimeff, Woodcock, & Contreras, 2013). Clinicians should be aware of the importance of exposure in the treatment of anxiety disorders. In addition, clinicians should be aware that exposure is currently underutilized in everyday practice. Therefore, when clinicians deviate from best practice by not using or underutilizing exposure techniques, it is first important to determine whether they are aware of the evidence in favour of exposure therapy and the lack of evidence against its use.

As the primary cause for clinicians not to use or underutilize exposure appeared to be their own anxiety (see Chapter 5), it is important to address clinicians' maladaptive beliefs (i.e., their own anxiety) regarding exposure. This may take the form of

psychoeducation for clinicians (as detailed above). If the clinician is experiencing cognitive dissonance over causing a client temporary distress, cognitive restructuring may benefit clinicians. Clinicians may also benefit from being exposed to their own anxieties regarding exposure therapies (Farrell, Deacon, Dixon, & Lickel, 2013). In addition to these methods, clinician anxiety regarding the use of exposure can also be addressed with the use of training videos or with the use of manuals with examples of how to conduct a therapy session that requires the use of exposure.

Open lines of communication. Clinicians may not be communicating clearly to clients (e.g., what needs to be done, why, and the likely consequences of doing or not doing specific elements of treatment). This lack of communication might explain the differences on each groups' reporting of what techniques were used on the therapy methods questionnaire (TMQ).

Communication is fundamental to almost every aspect of CBT, from psychoeducation to helping the client understand why certain techniques work. If communication is inadequate, clinicians may drift and clients may not understand what they are doing and why. If clients do not understand the use of techniques, they are less likely to implement them. Therefore, clinicians should pay attention to: clearly setting agendas; explaining what anxiety and anxiety disorders are; explaining what techniques are being used and why; and to answer any questions clients may have.

By setting agendas, clients and clinicians have a roadmap for what individual sessions should look like. This also provides a means for clients and clinicians to check if they have completed everything that was suppose to occur within session. By emphasizing psychoeducation (through explaining anxiety and anxiety disorders), clients will develop a better understanding of what is occurring when they are anxious and why certain techniques are important. By communicating what technique are being used and why, clients may be more likely to employ these techniques on their own (i.e.,

increase their own self-efficacy), which is one of the goals of CBT. Finally, by addressing clients' concerns and questions, clinicians can check if they adequately addressed those concerns.

Addressing clinicians' negative attitudes. The NACS might be used to help ensure good practice in CBT, via training and supervision of clinicians. In these settings, the NACS can be used to determine if clinicians who should be using CBT techniques hold negative attitudes towards CBT, which potentially keep them from using the appropriate techniques. Identification of biases against CBT might allow clinicians' attitudes to be addressed either by clinicians themselves or by clinical supervisors or training staff.

Supervision. While none of the studies in this dissertation found an association between supervision and use of techniques or with self-assessment bias, supervision has widely been regarded as way to prevent drift. Other research (e.g., Simpson-Southward, Hardy, & Waller, under consideration) have found that there is little evidence supporting supervision as having an effect on therapy outcomes. However, if supervision is going to be used it may reduce drift if several conditions are met.

Considering those conditions, first and foremost, supervision should be provided by someone who is experienced and component with the treatments used by their supervisees (Fairburn & Cooper, 2011). Second, it is important for clinicians to provide recordings of their sessions to their supervisors, as clinicians find it useful (Shepherd, Salkovskis, & Morris, 2009) and it provides an accurate report of what occurred in session. By using those recordings, supervision should check for adherence to protocols or theoretical paradigms or at the very least the active components that make the therapy work (e.g., exposure). Alternatively, it is beneficial for the supervisor to sit in on a supervisee's therapy session to enable appropriate feedback, based on fidelity to treatment. Third, given the level of self-assessment bias outlined above, it is important

for supervisors to assess their supervisees' knowledge and skills regarding the treatments they are using, and to link how these do or do not relate to client outcomes. Finally, given Simpson-Southward et al.'s (under consideration) research, it may be beneficial to ensure that supervision itself is being monitored, to ensure that appropriate supervision is being delivered by someone who understand the issues in delivery treatment and in supervision.

Should a supervisor identify lack of knowledge about the therapy, drift from protocols or a lack of competence, supervision should focus on addressing the identified issues. This way, supervisors and supervisees are aware of how effective the services being provided are, so that any deficits can be identified and addressed, and subsequent changes can be monitored. Should the supervisor drift, then the supervisor's failure to deliver adequate supervision should be addressed.

Continuing professional development. Clinicians appear unaware of their own weaknesses and shortcomings (as evidenced by self-assessment bias among clinicians). Clinicians' inaccurate beliefs tend to be more inaccurate the longer they have been in practice (as demonstrated in Chapter 6), despite the literature showing that clinicians' abilities actually decline over time (Shapiro & Shapiro, 1982). For these reasons, amongst others (e.g., invention of new techniques/approaches; updates to literature), clinicians should continue to seek out ongoing learning and training. Continuing professional development (continued supervision and additional training) allows clinicians' self-assessments to be assessed and addressed. As techniques change or new techniques are added to the therapists' toolbox, therapists will need continuing education to ensure they are using techniques correctly or are even aware of them.

7.5.2. The cost of therapist drift

Clients. Costs to the client need to be considered in terms of multiple aspects – the harm caused by inadequate therapy; longer-term suffering; and beliefs about therapy

that influence their future engagement and benefit. None of the 12% of clients who reported receiving CBT delivered to at least minimally acceptable levels reported harm as a result of therapy, whereas harm was reported by some clients who were told they received CBT but in actuality did not. Thus, therapist drift can indeed cause harm from the client's perspective (see Chapter 5, where clients who received at least minimally acceptable CBT reported no harm and those who were told they received CBT but did not actually receive CBT reported harm).

The widespread failure to deliver a therapy that can produce recovery (see Chapter 2) means that many anxious patients will continue to suffer far longer than necessary. The client might also need to go through services again (although still with a limited chance of receiving even minimally acceptable therapy).

Therapist drift can also cause clients to developed learned helplessness, as they come to see therapy as being unhelpful, leaving them anxious regardless of any efforts that they might make in the (inadequate) therapy. It is likely that many such patients will be less willing to attend therapy again, adding to their extended suffering.

Clinicians. A clinician who takes on a client who has previously had an inadequate course of CBT will have to do more work to educate the client on what CBT actually involves, in order to increase the patient’s optimism and willingness to engage in the work this time. It is likely that the therapist who drifts from protocols and best practice, is unaware that they are drifting, and, therefore, the therapist will not take steps to reduce their mistakes in delivering treatment.

Community and services. Assuming the clinicians' reports are the more accurate that approximately 50% of clinicians deliver minimally acceptable CBT, this means it takes (on average) two courses of therapy to achieve what one course should have. If however, the clients' reports, (which states roughly 10% of clinicians deliver minimally acceptable CBT), are more accurate this means that roughly it would take ten

courses of therapy to achieve what one course should have. This means, if the treatment length is supposed to be 10 sessions, it can take anywhere from 20 to 100 sessions for therapy to be effective. This puts a greater burden on clinicians and services in general by: creating more work for clients; clogging waiting lists with patients who have to repeat therapy; and delaying the chances of improvement. There is an increase in social, personal and financial costs cost of services, including lost earnings (outlined in Chapter 1) and an unnecessary burden placed on health services, anxious clients, society, families, employers, etc.

7.6. Limitations

The empirical work presented in this dissertation has limitations. In almost all cases, there was a low response rate, especially in the client sample. While this limitation can be addressed in future research by using longer recruitment periods, it was not feasible to do so in this dissertation. Another limitation is the use of self-report, as this only reflects what clients and clinicians remember, and might be is influenced by self-assessment bias. This limitation means that the precise figures for the frequency with which individual techniques are used are still unknown. Future research (see below) can address this limitation. Another limitation is the use of independent samples in Chapter 5, as the clients and clinicians in these studies did not work together. For example, selection biases might mean that the clinicians who volunteered were relatively good users of CBT (even though their use of techniques was still not strong), while the patient volunteers might be those who had poorer experiences. Fourth, the potential relationship between self-assessment bias and drift was not assessed directly. Considering the allocation of services based on reported technique use, the criteria used (in both the clinician and client arms of Chapter 5) were based on generalizing manuals for different disorders. Finally, given the cross-sectional design of all the studies here, these findings do not establish causality. Thus, only potential causes of therapist drift

are considered.

7.7. Future directions

This doctoral dissertation has demonstrated that there are many potential causes of therapist drift. However, it has not established a causal link between the potential causes and therapist drift. Therefore, there are still several studies needed, with more of an emphasis on experimental and intervention studies.

First, it is important to establish what can influence a clinicians' behaviour in session. One way to assess this is experimentally – for example, by manipulating patient variables in case vignettes, to determine whether clinicians' responses change. Additionally, this design can be extended to include assessing the relationship between clinicians' response and their internal states, by testing whether such states influence responses to the vignettes.

In order to get the most precise picture of what occurs in therapy, observation of therapy sessions is required. Observation can either be through direct (i.e., in the room) or indirect (i.e., audio/video) means. In addition, clients' and clinicians' reports could be compared to what was observed, to demonstrate who provides more reliable and accurate reports regarding what occurs during treatment. Additionally, by directly observing sessions, how clients and clinicians communicate can be thoroughly assessed. For example, it can be determined how well clinicians explain what techniques are being used and why they are being used.

It is particularly important to consider the impact of therapist drift on the outcome of therapy. Assessment at pre- and post-treatment could be conducted independently of measuring therapist drift, to determine what influence drift has on outcomes.

As outlined above and in detailed Chapter 1, there is a potential financial cost to drift. Unfortunately, clinicians and institutions often need to be made aware of the costs

of poor practice before they will adopt new approaches. Therefore, it will be important to determine the actual financial cost of drift by comparing the cost of services and lost earnings between clients who received adequate therapy in their first course (i.e., experienced no drift) versus those who did not (i.e., experienced drift). This comparison can be used to help frame why services, such as the National Health Services, should address therapist drift.

Finally, the relationship between self-assessment bias and therapist drift was not rigorously explored in this dissertation. Therefore, future studies should explore the relationship between these two variables. Not only is it important to consider the direct association between self-assessment bias and therapist drift, but it is also important to consider if self-assessment bias moderates any of the other potential causes of drift.

7.8. Conclusions

This doctoral dissertation aimed to determine: how well psychological interventions work in the treatment of anxiety disorders; what moderates treatment outcomes; to validate a novel measure; to determine the extent of drift; and to determine the potential causes of drift. Overall, psychological interventions for anxiety disorders are highly effective, especially it they involve the use of exposure. A large proportion of therapists deviate (between 50% to 90%) from best practice, and exposure techniques are the most underutilized techniques. This deviation from best practice appears to be driven by clinician anxiety and negative attitudes. Therapy in which drift occurs is seen as more harmful than an adequate dose of therapy. Finally, clients develop more confidence in clinicians who adequately deliver CBT than clinicians who do not. This field needs considerable further work to understand and improve the treatment of patients with anxiety disorders, building on and extending these findings.

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[* = Paper included in the meta-analysis in Chapter 2]

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Appendix A

Table A.1. Treatments for anxiety disorders.

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
Agoraphobia and panic disorder		
		CBT
	Gould et al. (1995)	• CBT compared to psychopharmacology o Compared to pharmacotherapy and combination, CBT alone out preformed both o CBT maintained gains compared to pharmacotherapy o CBT had fewer drop outs compared to pharmacotherapy
	Mitte (2005)	• CBT o 0.92 effect size in favour of CBT compared to no treatment control o 0.47 effect size in favour of CBT compared to placebo control • CBT versus psychopharmacology o No difference o CBT and pharmacotherapy were more effective than CBT alone • CBT versus behaviour therapy alone o Little difference in favour of CBT
	Clark et al. (1994)	• CBT o 1.11 effect size in favour of CBT over applied relaxation at end of treatment o 0.97 effect size in favour of CBT over applied relaxation at follow-up
	Öst et al. (1995)	• CBT o 0.41 effect size in favour of CBT over applied relaxation at end of treatment o 0.14 effect size in favour of CBT over applied relaxation at follow-up o 75% of CBT patients were panic free at end of treatment; 65% of applied relaxation patients were panic free at the end of treatment

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
		Exposure
	Sanchez-Meca et al. (2010)	• Exposure ○ All conditions involving exposure had large (≥ 1.29 in all cases) effect sizes in favour of exposure
	Barlow et al. (1989)	• Exposure + cognitive restructuring ○ 2.5 effect size in favour of exposure with cognitive restructuring over waitlist control
Specific Phobia		
		One-session Exposure

	Öst (1989)	• One-Session Exposure
		  ○ strong support for several phobias, such as: bird, cat, dog, rat, spider, and injection
		  ○ Strong effect sizes at follow-up
		  ○ Large improvements in 65% of animal phobic patricipants and 78% in injection phobic participants

	Zlomke et al. (2008)	• One-Session Exposure
		  ○ strong support for several phobias, such as: animals (various), claustrophobia, flying, and injection.
		  ○ support for both group therapy and individual therapy

Social Phobia (Social Anxiety Disorder)		
		CBT

	Furmark et al. (2002)	• CBT used exposure techniques
		• Compared CBT to psychopharmacology
		  ○ CBT just as well as citalopram
		  ○ 67% of participants in both the CBT and citalopram group responded to therapy

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
	Heimberg et al. (1998)	• CBT o 0.44 effect size in favour of CBT over placebo o Used group CBT o Used exposure based techniques
	Hope et al. (1995)	• CBT o 0.16 pre/post-test effect size on Fear Questionnaire-Social Phobia o Showed improvement across three measures o used group CBT • Exposure alone o 0.21 pre/post-test effect size on Fear Questionnaire -Social Phobia o Showed improvement across all four measures
		Exposure
	Butler et al. (1984)	• Exposure alone o Reduced symptoms of social phobia o Change maintained or improved at 6-month follow-up • Exposure with Anxiety Management o Out preformed exposure therapy on its own
	Newman et al. (1994)	• Group exposure therapy o 0.92 effect size in favour of exposure over waitlist o 0.29 pre/post effect size on the State Trait Anxiety Inventory – State subscale.

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
		Cognitive Therapy
	Clark et al. (2006)	• Cognitive therapy o 2.63 effect size compared to wait list control. o 1.17 effect size compared to Exposure and applied relaxation o Involved cognitive restructuring • Exposure and Applied Relaxation o 1.46 effect size compared to wait list control
	Clark et al. (2003)	• Cognitive therapy o 2.14 pre/post test effect size post treatment o 2.53 12-month follow-up effect size o Out preformed fluoxetine + self-exposure o Out preformed placebo + self-exposure
Obsessive-Compulsive Disorder		
		Exposure and Response Prevent (ERP) and CBT
	Cottraux et al. (2001)	• ERP o 2.37 pre/post-test effect size o 42.7 % of participants improved at post-test o 3.27 pre/follow-up effect size o 55.0% of participants remained improved at follow-up o Individual therapy • CBT o 2.36 pre/post-test effect size o 43.6% of participants improved at post-test o 2.68 pre/follow-up effect size o 49.3% of participants remained improved at follow-up o Individual therapy

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support

	Foa et al. (1984)	• ERP
		  ○ 90% of participants improved
		  ○ Tested exposure alone, against response prevention alone, against both parts combined.
		  ○ ERP reduced symptoms better than the individual components
		• Exposure alone
		  ○ 54.5% of participants improved
		• Response prevention alone
		  ○ 33.3% of participants improved

	Oldfield et al. (2011)	• Intensive CBT
		  ○ 1.57 pre/post-test effect size on the Obsessive-Compulsive Inventory
		  ○ 6-10 hours for 2-3 days a week for 2 weeks
		• Weekly CBT
		  ○ 0.92 pre/post-test effect size on the Obsessive-Compulsive Inventory
		  ○ 60-90 minutes a week over 12-18 weeks

	Whittal et al. (2005)	• ERP
		  ○ 1.85 pre/post-test effect size
		  ○ 51.9% of participants improved at post-test
		  ○ 1.68 pre/follow-up effect size
		  ○ 50.3% of participants remained improved at follow-up
		  ○ Individual therapy
		• CBT
		  ○ 2.90 pre/post-test effect size
		  ○ 54.9% of participants improved at post-test
		  ○ 3.09 pre/follow-up effect size
		  ○ 58.3% of participants remained improved at follow-up
		  ○ Individual therapy

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
		Acceptance and Commitment Therapy (ACT)

	Eifert et al. (2009)	• ACT
		  ○ Successfully reduces distress from anxiety though this treatment is not designed to target anxiety
		  ○ Improved quality of life

	Twohig et al. (2006)	• ACT
		  ○ 80% of patients improved at post-test, with regards to not damaging their skin as a result of their OCD (20% deteriorated)
		  ○ All participants reported lower anxiety on the Beck Anxiety Inventory

		Stress Management Training

	Whittal et al. (2010).	• Stress management training
		  ○ 1.90 pre/post effect size.
		  ○ CBT showed better symptom reduction

PTSD		
		Prolonged Exposure

	Foa et al. (1999)	• Prolonged Exposure alone
		  ○ 1.92 effect size compared to wait-list control
		• Prolonged Exposure + Stress Inoculation Training
		  ○ 1.50 effect size compared to wait-list control
		• Stress Inoculation Training
		  ○ 1.61 effect size compared to wait-lit control
		• No significant differences between Prolonged Exposure, Prolonged Exposure and Stress Inoculation Training, and Stress Inoculation training alone

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support

	Foa et al. (2005)	• Prolonged Exposure alone
		  ○ 1.37 effect size intent to complete on the PTSD Symptom Scale
		  ○ 3.31 effect size for completers on the PTSD Symptom Scale
		• Prolonged Exposure + Cognitive Restructuring
		  ○ 1.30 effect size intent to complete on the PTSD Symptom Scale
		  ○ 2.39 effect size for completers on the PTSD Symptom Scale
		• Addition of cognitive restructuring did not enhance treatment

	Resick et al. (2002)	• Prolonged Exposure
		  ○ 0.74 effect size for intent-to-treat on Clinician-Administered PTSD Scale (CAPS) compared to wait-list control
		  ○ 2.05 effect size for treatment completers on CAPS compared to wait-list control
		  ○ 15.4% of completers meet criteria for PTSD at 9-month follow-up
		• Cognitive Processing Therapy
		  ○ 0.97 effect size for intent-to-treat on CAPS compared to wait-list control
		  ○ 2.78 effect size for treatment completers on CAPS compared to wait-list control
		  ○ 19.2% of completers meet criteria for PTSD at 9-month follow-up
		• Prolonged Exposure versus Cognitive Processing Therapy
		  ○ Cognitive Processing Therapy showed a greater symptom reduction than prolonged exposure at post-test and 3-month follow-up
		  ○ Prolonged exposure showed a greater symptom reduction than Cognitive Processing Therapy at 9-month follow-up

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
		Eye Movement Desensitization Reprocessing (EMDR)

	Ironson et al. (2002)	• EMDR
		  ○ 1.53 pre-post effect size with both completers and intent-to-treat samples
		• Prolonged Exposure
		  ○ 1.54 pre-post effect size with intent-to-treat sample
		  ○ 2.18 pre-post effect size for completer sample
		• Additional notes
		  ○ Participants better tolerated EMDR over Prolonged Exposure (lower dropout rates)
		  ○ More EMDR participants achieved satisfactory improvement

	Lee et al. (2002)	• EMDR
		  ○ 2.48 within group effect size
		  ○ 83% of participants at both post-test and follow-up no longer met criteria for PTSD
		• Prolonged Exposure + Stress Inoculation Training
		  ○ 1.74 within group effect size
		  ○ 75% of participants at post-test no longer met criteria for PTSD
		  ○ 83% at follow-up no longer met criteria

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
		Other imaginal exposure based treatments

	Bryant et al. (2003)	• Imaginal Exposure
		  ○ 1.25 pre-post effect size with intent-to-treat on CAPS Intensity and 1.42 on CAPS frequency.
		  ○ 1.96 pre-post effect size for completers on both CAPS scales
		• Imaginal Exposure + Cognitive Restructuring
		  ○ 1.58 pre-post effect size with intent-to-treat on CAPS Intensity and 1.52 on CAPS frequency.
		  ○ 2.47 pre-post effect size with completers on CAPS Intensity and 2.02 on CAPS frequency.
		• Supportive Counselling
		  ○ 0.41 pre-post effect size with intent-to-treat on CAPS Intensity and 0.63 on CAPS frequency.
		  ○ 0.77 pre-post effect size with completers on CAPS Intensity and 1.06 on CAPS frequency.

	Tarrier et al. (1999)	• Imaginal Exposure
		  ○ 0.9 pre-post effect size on CAPS Global Severity
		  ○ 41% recovery rate at post treatment
		  ○ 26% recovery rate at follow-up
		• Cognitive Therapy
		  ○ 1.3 pre-post effect size on CAPS Global Severity
		  ○ 33% recovery rate at post treatment
		  ○ 35% recovery rate at follow up

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
Generalized Anxiety Disorder		
		CBT
	Borkovec et al. (1993)	• CBT ○ 1.86 pre/post-test effect size ○ Compared to 0.56 pre/post-test effect size for empathic listening ○ Relies on cognitive restructuring
	Dugas et al. (2010)	• CBT ○ 0.76 pre/post-test effect size on Clinician's Severity Rating (CSR) • Applied Relaxation ○ 0.62 pre/post-test effect size on CSR • Waitlist ○ 0.39 pre/post-test effect size on CSR
	Dugas et al. (2003)	• Group CBT ○ 1.76 pre/post-test effect size on CSR
	Rezvan et al. (2008)	• CBT ○ 0.8 pre/post test on the Penn State Worry Questionnaire • CBT + Interpersonal Therapy ○ 0.82 pre/post test on the Penn State Worry Questionnaire

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
		Applied Relaxation & Worry Exposure

	Hoyer et al. (2009)	• Applied Relaxation
		  ○ 0.54 pre/post test for completers on Hamilton Anxiety Rating Scale
		  ○ 56% recovery rate at post-test
		• Worry Exposure
		  ○ 0.54 pre/post test for completers on Hamilton Anxiety Rating Scale
		  ○ 48% recovery rate at post-test
		• Wait List Control
		  ○ 0.15 pre/post on Hamilton Anxiety Rating Scale

		ACT

	Roemer, et al. (2008)	• ACT
		  ○ 2.97 pre/post-test for intent-to-treat participants on CSR
		  ○ 2.34 pre/9-month follow-up for intent-to-treat participants on CSR
		  ○ 76.92% of participants to complete trial no longer met criteria for GAD; compared to 16.67% who were in the waitlist condition.

DSM-IV-TR Disorder (DSM-5 Disorder)	Study	Treatment and support
	Durham et al. (1999).	Anxiety Management and Analytic Psychotherapy • Analytic Psychotherapy o .08 pre/post test effect size on Brief Symptom Inventory for high contact (16-20 sessions) analytic psychotherapy o .13 pre/post test effect size on Brief Symptom for low contact (8-10 sessions) analytic therapy o 18% of participants deteriorated with high contact analytic psychotherapy for GAD at a one-year follow-up, compared to 0% for cognitive therapy. o 0% of participants were rated as 'Better' with high contact or low contact analytic psychotherapy. o 7% of participants deteriorated with low contact analytic psychotherapy for GAD. • Cognitive Therapy • Anxiety Management Training o 0.38 pre/post test effect size on Brief Symptom Inventory for low contact anxiety management training o No high contact trials o 6% of participants deteriorated with low contact anxiety management training at a one-year follow-up.

Note: Positive effect size indicates symptom reduction, unless indicated otherwise

Appendix B

Category 1: Disorder terms

Anxiety, anxiety disorders, generalized anxiety disorder, generalised anxiety disorder, GAD, post-traumatic stress disorder, post traumatic stress disorder, posttraumatic stress disorder, PTSD, simple phobia, phobias, social phobias, phobia, obsessive-compulsive personality disorder, obsessive compulsive personality disorder, OCD, panic disorders, separation anxiety, and situational anxiety

Category 2: Therapy terms

Therapy, therapies, treatment, treatments, cognitive behavior therapy, cognitive behaviour therapy, CBT, behavior therapy, behaviour therapy, behavioral therapy, behavioural therapy, behavioural modification, behavioral modification.

Category 3: Result terms

Results, outcome, efficacy, effectiveness, benefit, and impact.

Appendix C

---------- Forwarded message ----------
From: **Psychology Research Ethics Application Management System**
<no_reply@psychologyresearchethicsapplicationmanagementsystem>
Date: 2 December 2014 at 12:08
Subject: Approval of your research proposal
To: G.Waller@sheffield.ac.uk

Your submission to the Department of Psychology Ethics Sub-Committee (DESC) entitled "Effects of clinicians' perceptions of cognitive-behavioural therapy on their treatment of anxiety disorders " has now been reviewed. The committee believed that your methods and procedures conformed to University and BPS Guidelines.

I am therefore pleased to inform you that the ethics of your research are approved. You may now commence the empirical work.

Yours sincerely,
Dr Tom Webb

Chair, DESC

Appendix D

View this email in your browser

Dear colleague,

I am Zachary Parker, a PhD student at the University of Sheffield. I would like your help with a study. I aim to examine the relationship between personality style, knowledge, and perception of skills when treating an anxious population. In addition, I would like your views on cognitive behavioural therapy. This should take approximately ten minutes to complete, and has received ethical clearance from the Department of Psychology at the University of Sheffield.

Of course, all your answers will be held in the strictest confidence.

If you are interested in participating in this study, please click the link to fill out the survey:
https://sheffieldpsychology.eu.qualtrics.com/SE/?SID=SV_cLTKL7gkbMJfyYt

If you have any questions, please do not hesitate to e-mail me or call me at (0144 222 6504).

Thank you for your time and participation.

Sincerely,

Zachary Parker

If you do not want to participate in this study please, click here

Appendix E

The University Of Sheffield.

Department Of Psychology.
Clinical Psychology Unit.

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Clinicians' practices in their treatment of anxiety disorders: Information Sheet

Thank you for considering taking part in this research.

We would like to understand the relationship between your personality style, knowledge, and perceptions of skills. This survey will focus on your clinical work with clients diagnosed with an anxiety disorder. If you do not work with anxious patients, please do not complete this survey. To ensure that we are able to get the most accurate view possible, please answer the questions as honestly and accurately as possible.

All answers are confidential. Only your scores will be retained by the researchers. After data collection is complete, all email addresses will be deleted (unless you indicate on the consent form that you would like a summary of the research findings, in which case your address will be kept separate from your reported experiences).

If you have any questions or concerns, please contact Zachary Parker or Glenn Waller (details provided above). If you have any further concerns, please contact the University of Sheffield's Office of the Registrar and Secretary at 0114 222 1101. If this questionnaire raises any professional concerns, please speak to your clinical supervisor.

Thank you once again for your time. We appreciate your help in completing our research.

Zachary Parker

Appendix F

The University Of Sheffield.

Department Of Psychology.
Clinical Psychology Unit.

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Clinicians' practices in the treatment of anxiety disorders: Consent Form

We aim to examine the relationship between clinicians' personalities, knowledge, and view of their clinical skills when working with anxiety disorders.

If you are willing to take part, please tick the box and sign below to indicate consent. Please note that all your answers will be stored anonymously and your details will not be disclosed to anybody else. We would need your email only for the purpose of forwarding you a summary of the research findings (if you wish).

I agree to my answers being used for research in this project and I understand that I can withdraw consent at any time (please tick) ☐

Signed: _____

Date: _____

Appendix G

You and your clinical practice

Age: _____ years

Gender: Male ☐ Female ☐ Prefer not to say ☐

Ethnicity: White ☐ Asian or Asian British ☐ Black or Black British ☐
Mixed Ethnicity ☐ Other ☐ (please specify: _____)

For how many years have you been qualified: _____ years

What is your **core** profession:
Clinical Psychologist ☐ Counselling Psychologist ☐ Psychiatrist ☐
Psychiatric Nurse ☐ Clinical Social Worker ☐ Marriage and Family Therapist ☐
Licensed Professional Counsellor ☐ Other ☐ (please specify: _____)

What theoretical orientation do you most often use (Select one):

Cognitive behavioural therapy ☐ Behavioural Therapy ☐

Psychodynamic/psychoanalytic ☐ Humanistic ☐

Existential ☐ Postmodern ☐ Transpersonal ☐

Other ☐ (please specify: _____)

Do you have professional accreditation: Yes ☐ No ☐
.....…….if Yes, with which organisation? _____

<u>On average:</u>

How many hours do you work *per week*: _____

How many hours *per week* do you spend in face-to-face contact with anxious clients:
_____

How many therapy sessions do you have with an anxious client before treatment is completed: _____

How long are your sessions with anxiety disorder clients:
Under 45 minutes ☐ 45-90 Minutes ☐ 90 minutes or longer ☐

How many hours *per month* do you spend in clinical supervision, based on <u>your</u> cases:
_____

How many hours *per month* do you spend in supervising <u>other people's</u> clinical work:

_____

Your experience treating anxiety disorders

*The following questions relate to your clinical experience working with **anxiety disorders** (e.g., PTSD, simple phobia, social phobia, OCD, generalised anxiety disorder, etc.)*

General ratings

1. How would you rate your own clinical skills in working with anxiety, compared to other clinicians with similar qualifications and experience? Please rate your skills on a scale of 0-100 (0 = "I am the poorest", 50 = "I am average", 100 = "I am the best"): _____

2. Using percentages (totalling 100%), please tell us what proportion of your <u>anxiety-disordered</u> clients recover, improve, stay the same, or deteriorate

Recover	Improve	Stayed the same	Deteriorate
(no longer displaying symptoms and no longer needing therapy)	*(significant symptom reduction at the end of therapy, but still some problems)*	*(no change following therapy)*	*(significant symptom increase by the end of therapy)*
_____ %	_____ %	_____ %	_____ %

Therapy methods questionnaire

Different therapists use different methods. We are interested in what you use in your routine clinical practice with anxious clients, both in session and outside the session.

The first column asks how often you use these skills (e.g., 0% = 'never used'; 50% = 'used in half of such sessions'; 100% = 'used in every session')
The next column asks how confident you are using this skill, whether you use it in everyday practice or not.

In therapy with an anxious patient, do you....	**% Sessions**	**% Confidence**
Look at links between beliefs, thoughts, and feelings		
Explore patterns of relating to people in the client's life		
Use reflective listening		
Offer unconditional positive regard		
Set an agenda for the session		
Give the client homework		

In therapy with an anxious patient, do you....	**% Sessions**	**% Confidence**
Explore the client's childhood, in order to understand the present better		
Draw diagrams explaining the problem, which link thoughts, feelings and behaviours		
Draw diagrams showing the patterns your client has in relating to people		
Use silence as a therapeutic tool		
Remain silent for most of the session, allowing your clients to talk freely about whatever was on their mind at the time		
Have your client do reading on their anxiety problem		
Focus on transference and the emotional relationship in the room		
Focus on defence mechanisms		
Spend time in sessions looking at problems other than the anxiety disorder itself (e.g., relationship problems)		
Role-play where the client plays someone else and the therapist plays the client		
Help your client to develop new skills or to regain former skills		
Have your client keep thought records or diaries		
Concentrate on anxiety-producing beliefs		
Address the meaning attached to thoughts		
Work with your client to alter interpretation of thoughts		
Use thought stopping skills		
Emphasize behaviour change rather than working directly on thoughts		
Use relaxation exercises		
Use *in vivo* exposure techniques in your office		
Use *imaginal* exposure techniques in your office		
Have your client do exposure exercises for homework		
Have your client do exposure exercises outside the office with you present		
Use flooding as a form of exposure		
Use systematic desensitization as a form of exposure		

Self-evaluation questionnaires

Please rate each of these items for how characteristic it is of you.

	Not at all characteristic of me	A little characteristic of me	Somewhat characteristic of me	Very characteristic of me	Entirely characteristic of me
1. Unforeseen events upset me greatly.	1	2	3	4	5
2. It frustrates me not having all the information I need.	1	2	3	4	5
3. Uncertainty keeps me from living a full life.	1	2	3	4	5
4. One should always look ahead so as to avoid surprises.	1	2	3	4	5
5. A small unforeseen event can spoil everything, even with the best of planning.	1	2	3	4	5
6. When it's time to act, uncertainty paralyses me.	1	2	3	4	5
7. When I am uncertain I can't function very well.	1	2	3	4	5
8. I always want to know what the future has in store for me.	1	2	3	4	5
9. I can't stand being taken by surprise.	1	2	3	4	5
10. The smallest doubt can stop me from acting.	1	2	3	4	5
11. I should be able to organize everything in advance.	1	2	3	4	5
12. I must get away from all uncertain situations.	1	2	3	4	5

Please rate how strongly you agree with each of these statements.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I feel that I am a person of worth, at least on an equal basis with other people.	1	2	3	4
2. I feel that I have a number of good qualities.	1	2	3	4
3. All in all, I am inclined to feel that I am a failure.	1	2	3	4
4. I am able to do things as well as most other people.	1	2	3	4
5. I feel I do not have to be much to be proud of.	1	2	3	4
6. I take a positive attitude toward myself.	1	2	3	4
7. On the whole, I am satisfied with myself.	1	2	3	4
8. I wish I could have more respect for myself.	1	2	3	4
9. I certainly feel useless at times.	1	2	3	4
10. At times I think I am no good at all.	1	2	3	4

Beliefs about CBT

We are interested on your views on CBT. Please rate how accurate you find the following statements that clinicians have made elsewhere:

Cognitive behaviour therapy (CBT)...	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1) ... is too complicated							
2) ... focuses too much on large and/or complicated psychological problems							
3) ... is dehumanizing							
4) ... limits the therapist							
5) ... uses a one-size-fits-all approach							
6) ... is no more effective than using interventions that are based on my clinical expertise							
7) ... has conflicting research on what methods/interventions to use							
8) ... asks the client to do homework that is too hard							
9) ... is a simplified version of psychodynamic therapy							
10) ... does not work as well among patients from minority groups							
11) ... is restricted by the use of treatment manuals and protocols							
12) ... does not work for comorbid cases							
13) ... is the therapist telling the client what to do							
14) ... is too hard to implement in real-life settings							
15) ... downplays emotions and over-emphasizes logical thought							
16) ... doesn't focus on specific disorders							
17) ... offers no hard evidence to support many of its claims							
18) ... is superficial and does not get at the underlying core problems							
19) ... only works for those who fit a specific profile							
20) ... is too stressful for clients							

Thank you for taking part in this research. Your help is much appreciated.

If you would like a copy of a brief report on the findings of this study, please provide your email:

_____

If you would be happy to be approached for future studies, please provide your email:

_____

Appendix H

Negative Attitudes towards CBT Scale

We are interested on your views on CBT. Please rate how accurate you find the following statements that clinicians have made elsewhere:

Cognitive behaviour therapy (CBT)...	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1) ... is dehumanizing	1	2	3	4	5	6	7
2) ... limits the therapist	1	2	3	4	5	6	7
3) ... uses a one-size-fits-all approach	1	2	3	4	5	6	7
4) ... is no more effective than using interventions that are based on my clinical expertise	1	2	3	4	5	6	7
5) ... asks the client to do homework that is too hard	1	2	3	4	5	6	7
6) ... does not work as well among patients from minority groups	1	2	3	4	5	6	7
7) ... is restricted by the use of treatment manuals and protocols	1	2	3	4	5	6	7
8) ... does not work for comorbid cases	1	2	3	4	5	6	7
9) ... is the therapist telling the client what to do	1	2	3	4	5	6	7
10) ... is too hard to implement in real-life settings	1	2	3	4	5	6	7
11) ... downplays emotions and over-emphasizes logical thought	1	2	3	4	5	6	7
12) ... doesn't focus on specific disorders	1	2	3	4	5	6	7
13) ... offers no hard evidence to support many of its claims	1	2	3	4	5	6	7
14) ... is superficial and does not get at the underlying core problems	1	2	3	4	5	6	7
15) ... only works for those who fit a specific profile	1	2	3	4	5	6	7
16) ... is too stressful for clients	1	2	3	4	5	6	7

NACS scoring key:

- All items are positively scored 1-7
- The Negative Attitudes towards CBT scale only has one factor.
- The overall score is the mean of all 16 items (total the 16 items and divide by 16).
- Up to two items can be missed from this scale, and the scale mean can be adjusted accordingly. However, if more are missing, then the scores are invalid.

Appendix I

---------- Forwarded message ----------
From: **Psychology Research Ethics Application Management System**
<no_reply@psychologyresearchethicsapplicationmanagementsystem>
Date: 18 March 2015 at 17:10
Subject: Approval of your research proposal
To: G.Waller@sheffield.ac.uk

Your submission to the Department of Psychology Ethics Sub-Committee (DESC) entitled "Clients' experiences in therapy and their perceptions of therapy " has now been reviewed. The committee believed that your methods and procedures conformed to University and BPS Guidelines.

I am therefore pleased to inform you that the ethics of your research are approved. You may now commence the empirical work.

Yours sincerely,
Prof Paul Norman

Acting Chair, DESC

Appendix J

Title:
Have you had an anxiety problem that has required help?

Content:
If you have had an anxiety problem that has required psychological therapy, then we would like to ask for your help.

We would like to understand your experience of therapy (based on the most recent episode of therapy that you have completed, if you have had more than one).

This is so that we can determine what methods clinicians use in therapy, and how that fits with the evidence-based guidelines. We already know what clinicians tell us they do, but we want to see whether clients' experiences match that version.

We would like you to tell us about the most recent episode of treatment that you have completed, even if it ended early or was not as effective as you hoped.

We would appreciate it if you are willing to take part. To do so, you will need to complete an online survey, taking approximately 15 minutes. The survey can be found at:

https://sheffieldpsychology.eu.qualtrics.com/SE/?SID=SV_1TB2ADjcj7LXsoJ

All of your answers will be confidential. If you want a summary of the findings, you will need to provide an e-mail address, but it will be used only for this purpose.

If you have any questions or concerns please contact Zachary Parker (zjparker1@sheffield.ac.uk) or Glenn Waller (g.waller@sheffield.ac.uk). If you have any further concerns, please contact the University of Sheffield's office of the Registrar and Secretary at 0114 222 1101.

Thank you,

Zachary Parker

Appendix K

The University Of Sheffield.

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Clients' experiences in therapy and their perceptions of therapy: Information Sheet

This page is for your records. A copy of this page can be downloaded here

We are looking to examine what occurs in therapy and your personal experiences with therapy. We're asking you to speak about your most recent complete treatment experience, not on-going treatment. Completed treatment experiences also include treatment that ended early. To ensure that we are able to get the most accurate view possible, please answer the questions as honestly and accurately as possible.

All answers are confidential. Your scores will be identifiable only by the researchers involved. After data collection is complete, all email addresses will be deleted (unless you indicate on the consent form that you would like a summary of the research findings). If this questionnaire raises any concerns, please speak to your GP/family doctor or a mental health professional.

If you have any questions or concerns, please contact Zachary Parker or Glenn Waller (details provided above). If you have any further concerns, please contact the University of Sheffield's Office of the Registrar and Secretary at 0114 222 1101.

Thank you once again for your time. We appreciate your help in completing our research.

Zachary Parker

Appendix L

The University Of Sheffield.

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Clients' experiences in therapy and their perceptions of therapy: Consent Form

If you are willing to take part, please tick the boxes below to indicate consent. Please note all your answers will be stored anonymously and your details will not be disclosed to anyone else. We would need your email only for the purpose of forwarding you a summary of the research findings (if you wish).

I have read the information sheet on the previous page Yes ☐ No ☐

I have the contact information of the researchers to ask any questions and discuss the study (by phoning or e-mailing the researcher listed on the top of the page) Yes ☐ No ☐

If I asked the researchers any questions, my questions were answered adequately
Yes ☐ No ☐ Not applicable ☐

I understand I am free to leave the study at any time and without having to give any reason
Yes ☐ No ☐

I agree to my answers being used for research in this project Yes ☐ No ☐

Appendix M

Your Details

Age: _____ years

Gender: Male ☐ Female ☐ Prefer not to say ☐

Ethnicity: White ☐ Asian or Asian British ☐ Black or Black British ☐
Mixed Ethnicity ☐ Other ☐ (please specify: _____)
Prefer not to say ☐

Employment Status: Employed (full-time) ☐ Employed (part-time) ☐
Unemployed ☐ Student ☐ Retired ☐
Other ☐ (please specify: _____)

Marital Status: Single (never married) ☐ Married ☐ Separated ☐
Cohabitating ☐ Divorced ☐ Widowed ☐
Other ☐ (please specify: _____)

At the time of treatment, what anxiety disorder were you being treated for?

Agoraphobia without Panic Disorder ☐ Agoraphobia with Panic Disorder ☐
Specific Phobia ☐ Social Anxiety ☐ Obsessive-Compulsive Disorder ☐
Post-Traumatic Stress Disorder ☐ Generalized Anxiety Disorder ☐
Other ☐ (please specify: _____) Not stated ☐

At the time of treatment, did you have one or more other psychiatric diagnoses?

Yes ☐ No ☐

... If so, what were the diagnoses? _____

How old were you when you first experienced anxiety problems? _____ years

How old were you when you first sought professional help for anxiety? _____ years

Your Experience in Therapy

This questionnaire asks questions about your most recent experience in therapy and what occurred in that therapy. I am only asking about psychological (non-medicine-based treatments). ***Please do not include on-going therapy.***

Was the main aim of treatment to address anxiety problems? Yes ☐ No ☐

Was the main aim of treatment to address other (non-anxiety) problems? Yes ☐ No ☐

When did your first start this treatment? _____ Year

How long did therapy last? _____ Years _____ Months

Who was the primary mental healthcare provider during your treatment:

GP/Family Doctor ☐ Psychologist ☐ Psychiatrist ☐

Psychiatric Nurse/CPN ☐ Social Worker ☐ Marriage and Family Therapist ☐

Counsellor ☐ Support Group/Self-Help Group ☐

Psychodynamic Psychotherapist ☐ Other ☐ (please specify:

_____)

Not sure ☐

Did your therapist state if s/he was a cognitive behaviour therapist? Yes ☐ No ☐ Unsure ☐

Were you a private or NHS patient? Private ☐ NHS ☐

Were you an inpatient (stayed in hospital during treatment), outpatient or daypatient (tick all that apply)?

Inpatient ☐ Outpatient ☐ Daypatient ☐

Approximately, how many sessions did your treatment last? _____ Sessions

Approximately how long (in minutes) did each session last?

Under 45 minutes ☐ 45-90 Minutes ☐ 90 minutes or longer ☐

What type of therapy did you therapist say you were receiving?

Supportive Therapy ☐ Behaviour Therapy ☐ Cognitive Behaviour Therapy ☐

Eclectic ☐ Person-Centred ☐ Humanist ☐ Psychodynamic Therapy ☐

Counselling ☐ Family/Couple Therapy ☐ Other ☐ (please specify:

_____)

Not sure ☐ Not stated ☐

Have you previously sought treatment for your anxiety disorder? Yes ☐ No ☐

Your views on this therapy experience

Please tell us about your experience in therapy. If you have nothing to say in response to one of these questions, please move on to the next one.

What was **beneficial** about therapy?

_____
_____
_____
_____

What was **harmful** about therapy?

_____
_____
_____
_____

What important things did you speak about during the sessions?

_____
_____
_____
_____

What did you enjoy about therapy?

_____
_____
_____
_____

What did you not enjoy about your therapy?

_____
_____
_____
_____

What would you change about your therapy?

_____
_____
_____
_____

Therapy methods questionnaire

Different therapists use different methods. We are interested in what occurred in your last completed therapy experience, both in session and outside the session.

The column to the right asks how many sessions included use of these methods (e.g., 0% = 'never used'; 50% = 'used in half of such sessions'; 100% = 'used in every session')

In therapy, how often did your therapist…	**% Sessions**
Have you look at links between beliefs, thoughts, and feelings	
Explore patterns you had of relating to people in your life	
Set an agenda (planned with you what was going to happen in the session)	
Give you homework to do between sessions	
Follow up on your homework	
Explore your childhood with you, in order to understand the present better	
Spend most of the session talking about your childhood/past experiences	
Draw diagrams explaining the problem, which linked thoughts, feelings, and behaviours	
Draw diagrams showing the patterns you had in relating to people	
Remain silent even if you were not talking	
Remain silent for most of the session, allowing you to talk freely about whatever was on your mind at the time	

The column to the right asks how many sessions included use of these methods (e.g., 0% = 'never used'; 50% = 'used in half of such sessions'; 100% = 'used in every session')

In therapy, how often did your therapist…	**% Sessions**
Have you do reading on your anxiety problem	
Spend time in sessions looking at problems other than your anxiety disorder (for example, relationship problems)	
Role-play, where you played someone else and the therapist played you	
Help you develop new skills or regain former skills	
Have you keep a thought record or diary	
Concentrate on your anxiety-producing beliefs	
Talk about the meaning of your thoughts	
Work on changing the meaning attached to your thoughts	
Work on thought stopping skills (for example, snapping a rubber band on wrist; thinking 'stop' when a bad thought came to mind; or learning to focus your attention on other thoughts)	
Focus on behaviour change rather than working directly on thoughts	

The column to the right asks how many sessions included use of these methods (e.g., 0% = 'never used'; 50% = 'used in half of such sessions'; 100% = 'used in every session')

In therapy, how often did your therapist…	**% Sessions**
Teach you to do relaxation exercises	
Have you interact with or be around things that you feared while in your therapist's office	
Have you face your anxieties by imagining them, while still in your therapist's office	
Have you face your fears (by imaging, or interacting with them, or being near them) between sessions	
Have you interact with or be around things you feared, outside of your therapist's office but with your therapist present	
Have you write a personal hierarchy of fear/anxiety with your therapist (where you listed your fears from least to worst)	
Have you undertake a session where you were exposed to something that you feared all at once (rather than building up to it slowly)	
Expose you to the thing that you most feared, by building up to it slowly over the session or over several sessions (rather than all at once)	
Have you relive past traumatic experience by speaking aloud (in the present) about the experience	
Teach you to accept your thoughts and to let them pass without worrying over them	

Therapy outcomes

How did therapy end?

Completed treatment ☐ Stopped attending sessions before completion ☐

The therapist left the clinic/transferred me ☐ Other ☐ (please specify: _____)

How long ago did therapy end? _____

What was the impact of therapy on your anxiety:

On a scale of 0 to a 100% (0 being not at all, 100 being completely), how *beneficial* was your last therapy experience: _____%

On a scale of 0 to a 100% (0 being not at all, 100 being completely), how *harmful* was your last therapy experience: _____%

Would you say that you recovered from your anxiety as a result of that episode of therapy?

Yes ☐ No ☐ Other ☐ (please explain: ____)

Therapy can teach new coping skills or enhance old coping skills for dealing with anxiety. On a scale of 0 to 100% (0 being not at all, 100 being completely), how much did your therapy improve your coping skills for dealing with anxiety: _____%

What was the impact of therapy on other aspects of your life:

On a scale of 0 to a 100% (0 being not at all, 100 being completely), how *beneficial* was your last therapy experience: _____%

On a scale of 0 to a 100% (0 being not at all, 100 being completely), how *harmful* was your last therapy experience: _____%

Your views about your therapist

Listed below are questions about your therapist's personality. Please rate the following items on a scale of 1 to 7 (where 1 was not characteristic of your therapist and 7 was completely characteristic of your therapist).

Your therapist was...	1- Not characteristic	2- Very uncharacteristic	3- Somewhat uncharacteristic	4- Neutral/No opinion	5- Somewhat characteristic	6- Very characteristic	7- Completely characteristic
... anxious	❍	❍	❍	❍	❍	❍	❍
... reliable	❍	❍	❍	❍	❍	❍	❍
... professional	❍	❍	❍	❍	❍	❍	❍
... competent	❍	❍	❍	❍	❍	❍	❍
... bored	❍	❍	❍	❍	❍	❍	❍
... angry	❍	❍	❍	❍	❍	❍	❍
... firm	❍	❍	❍	❍	❍	❍	❍
... happy	❍	❍	❍	❍	❍	❍	❍

On a scale of 1 to 7, how much did you like your therapist at the <u>start</u> of therapy? (1 completely disliked, 4 neutral, 7 completely liked)

	1 - Completely disliked	2- Strongly disliked	3- Slightly disliked	4- Neutral	5- Slightly liked	6- Strongly liked	7- Completely liked
How much did you like your therapist?	❍	❍	❍	❍	❍	❍	❍

On a scale of 1 to 7, how much did you like your therapist at the <u>end</u> of therapy? (1 completely disliked, 4 neutral, 7 completely liked)

	1 - Completely disliked	2- Strongly disliked	3- Slightly disliked	4- Neutral	5- Slightly liked	6- Strongly liked	7- Completely liked
How much did you like your therapist?	❍	❍	❍	❍	❍	❍	❍

My email is (only complete if you want a summary of the research) _____

If you would not mind being approached for future studies, please provide your email: _____

You have reached the end of this survey, please click 'Next' to submit it. If you want to go back and change any of your earlier answers, this is your last opportunity to do so.

Thank you once again for your time,

Zachary Parker

Zjparker1@sheffield.ac.uk

Appendix N

---------- Forwarded message ----------
From: **Psychology Research Ethics Application Management System** <no_reply@psychology>
Date: 13 January 2014 08:44
Subject: Approval of your research proposal
To: G.Waller@sheffield.ac.uk

Your submission to the Department of Psychology Ethics Sub-Committee (DESC) entitled "Factors influencing psychotherapists' perceptions of their skills" has now been reviewed. The committee believed that your methods and procedures conformed to University and BPS Guidelines.

I am therefore pleased to inform you that the ethics of your research are approved. You may now commence the empirical work.

Yours sincerely,

Prof Richard Crisp

Chair, DESC

Appendix O

Dear colleagues,

I am Zachary Parker, a PhD student at the University of Sheffield. I would like your help with a study. I aim to examine clinicians' view of their skills in general clinical work and in working with anxiety specifically. In addition, I am examining how personality relates to those views. This should take approximately five minutes, and has received ethical clearance from the Department of Psychology at the University of Sheffield.

Of course, all your answers will be held in the strictest confidence.

If you are interested in participating in this study, please click link to fill out the survey:
https://sheffieldpsychology.qualtrics.com/SE/?SID=SV_2tb8n4xSrV0cG57

If you have any questions, please do not hesitate to e-mail me.

Thank you for your time and participation.

Sincerely,
Zachary J. Parker

Appendix P

The University Of Sheffield.

Department Of Psychology.
Clinical Psychology Unit.

Zachary J. Parker
PhD Candidate
Department of Psychology
University of Sheffield
Western Bank
Sheffield S10 2TP UK

Telephone: 0114 222 6504
Email: zjparker1@sheffield.ac.uk

Clinicians' views of their therapeutic skills: Information sheet

Thank you for agreeing to fill out this survey.

I am aiming to examine the relationships between personality and clinicians' view of their clinical skills in general clinical work. In addition, I am examining how personality relates to clinicians' view of their clinical skills when working with clients diagnosed with anxiety disorders. To ensure that we are able to get the most accurate data possible, I hope that you will answer the questions as honestly and accurately as possible.

If you are interested in participating in any follow-up surveys, please provide your e-mail on the last question of the survey. I would appreciate any additional time you are willing to give.

All answers are confidential and individual data will only be identifiable during data collection by the researchers involved. After data collection is complete all email addresses will be deleted (unless you indicate on the consent form that you would like a summary of the research findings). If this questionnaire causes any professional concerns, please speak to your clinical supervisor.

Thank you once again for your time, I appreciate the help in completing our research.

Appendix Q

Department Of Psychology.
Clinical Psychology Unit.

Zachary J. Parker
PhD Candidate
Department of Psychology
University of Sheffield
Western Bank
Sheffield S10 2TP UK

Telephone: 0114 222 6504
Email: zjparker1@sheffield.ac.uk

Clinicians' views of their therapeutic skills: Consent Form

I am conducting a study on the relationship between personality and supervision on psychotherapists' self-assessment of skills and therapy outcomes. I would appreciate your honest responses to our survey.

I would like to use your responses for an associated piece of research. If you are willing to allow your answer to be used in this way, please sign below on to indicate consent. If you are attending a training seminar by Prof. Glenn Waller, this is not mandatory. Please note that all your answers will be stored anonymously and your ID will not be disclosed to anybody else. We would need your email only for the purpose of forwarding you a summary of the research findings.

I agree to my answers being used for research in this project and I understand that I can withdraw consent at any time. ☐

I would like a summary of the findings of this research. ☐

My email is (only complete if you want a summary of the research)

_____

Signed_____

Date_____

Appendix R

Please answer the following questions to the best of your abilities and thank you once again.

The first questions will be about you and your clinical practice:

Age: _____

Gender: Male ☐ Female ☐

Ethnicity: White ☐ Asian or Asian British ☐ Black or Black British ☐
Mixed Ethnicity ☐ Other (_____) ☐

For how many years have you been qualified: _____

What is your profession: _____

Do you have professional accreditation: _____

.....if yes, with which organisation? _____

How many hours do you work per week: _____

How many hours per week do you spend in face-to-face contact with clients:
_____

How many hours per month do you spend in clinical supervision, based on your cases:
_____

How many hours per month do you spend in supervising other people's clinical work:
_____

Your general clinical experience
The following questions pertain to your general clinical experience, whatever the clinical group(s) you work with.

Compared to colleagues with similar qualifications, on a scale of 0-100 (0 = the poorest, 50 = average. 100 = the best), how would you rate your own clinical skills:
_____

If you work in a team of therapists:
Compared to similar teams, on a scale of 0-100 (0 = the poorest, 50 = average. 100 = the best), how would you rate your team's clinical skills overall: _____

Using percentages (totalling 100%), please tell us what proportion of your clients recover, improve, stay the same, or deteriorate
(Recovery = no longer displaying symptoms and no longer needing therapy; improve = significant symptom reduction at the end of therapy, but still some problems; stayed the same = change following therapy; deteriorated = significant symptom increase by the end of therapy):

Recover _____ Improve _____ Stay the Same _____ Deteriorate _____

Your experience treating anxiety disorders
(If you have no experience working with anxiety disorders please skip to these questions and go the next section.)

The following questions pertain to your experience with anxiety disorders (e.g., PTSD, simple phobia, social phobia, OCD, obsessional thought, etc.).

Compared to colleagues with similar qualifications, on a scale of 0-100 (0 = the poorest, 50 = average. 100 = the best), how would you rate your own clinical skills in working with anxiety: _____

If you work in a team of therapists:
Compared to similar teams, on a scale of 0-100 (0 = the poorest, 50 = average. 100 = the best), how would you rate your team's clinical skills in working with anxiety:
_____

Using percentages (totalling 100%), please tell us what proportion of your anxiety-disordered clients recover, improve, stay the same, or deteriorate
(Recovery = no longer displaying symptoms and no longer needing therapy; improve = significant symptom reduction at the end of therapy, but still some problems; stayed the same = change following therapy; deteriorated = significant symptom increase by the end of therapy):

Recover _____ Improve _____ Stay the Same _____ Deteriorate _____

Your personal style

Finally, here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which *you agree or disagree with that statement.* You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
1	2	3	4	5	6	7

I see myself as:

1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.

If you want a copy of the report, please provide your email:

_____

If you would not mind being approached for future studies, please provide your email:

_____