

Exploring the influence of pre-therapy epistemic trust  
levels on the effectiveness of therapy for mild to moderate  
common mental health difficulties

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### Thesis declaration form

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signature:



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## Overview

Paper one is a conceptual introduction of the literature on the factors that make psychotherapy effective. There is particular emphasis on the concept of epistemic trust and how this, within the theory of the three communication systems, could be an underlying factor in the effectiveness of psychotherapy. Specific and common factors of psychotherapy, as well as therapist and patient factors, are discussed, and how epistemic trust is linked to these well evidenced factors is explored. The need for further research into the relationship between epistemic trust and adverse life events, mental health difficulties, and improvement in therapy is highlighted, this sets the precedent for the empirical paper.

Paper two, the empirical paper, describes the process of exploring epistemic trust within an IAPT population in order to further elucidate how this concept can be useful in understanding the development of mental health difficulties, what makes psychotherapy effective, and how psychotherapy might need to be adapted depending on an individual's level of epistemic. Results indicated that epistemic trust was associated with more severe mental health difficulties pre-therapy, epistemic trust level improved after therapy, and that those with lower levels of epistemic trust had less improvement in their mental health symptoms.

Paper three consists of a critical appraisal of the process of completing this doctoral research. Topics covered include; what drew me to the project initially (particularly based on my interests and experiences), how completing the research challenged some of my

preconceptions, how I dealt with difficulties in recruitment, and what I would have changed. Paper three finishes by discussing the clinical and scientific implications of the research, and suggesting future avenues for research.

### **Impact Statement**

This thesis broadens the understanding of epistemic trust and what makes psychotherapy effective. The findings indicate that assessment of epistemic trust before, during, and after therapy could be helpful in contributing to treatment decisions (including type of therapy and how many sessions) as well as monitoring progress. This could mean that therapy is better personalised to the individual and thus more effective, in so doing saving healthcare services money whilst also reducing the suffering of the individual with the mental health difficulty.

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## **Part 1: Literature Review**

### **Conceptual Introduction**

**What makes therapy effective? How Epistemic Trust  
could be the key missing link**

## **Abstract**

The effectiveness of therapy is a very complex concept to explore, with numerous meta analyses presenting the factors that are important. Specific and common factors, expectancy and placebo effects, and extra therapeutic change are those with the greatest evidence base. I propose that epistemic trust could be a missing link, and underlying factor, to these factors. I present this argument within the three communication systems theory and introduce how my empirical paper can help to explore this area.

## **Introduction**

The mechanisms by which therapy results in positive and meaningful change in people's lives has been debated for decades, often centering on which therapeutic modality and theory is 'the best' at understanding the human distress and thus what is best to alleviate it.

The evidence base is vast, and unsurprisingly opaque when the task of 'therapy' is a varied and complex process – sometimes between two people, sometimes between many – and utilises diverse tools and techniques.

This conceptual introduction will explore this evidence base, and the extent to which the effectiveness of therapy has been explained. It will focus on the concept of epistemic trust, and discuss how this could be a key concept in therapeutic effectiveness.

Epistemic trust describes a person's ability or willingness to accept information given to them in a social context. In order to do so, they must trust that the information is of value and personal relevance, that the person delivering it can be trusted, and that information is worth retaining for application in other situations. (Fonagy et al, 2015).

This introduction will first describe the three communication systems and epistemic trust as a necessary component of the re-emergence of these systems. It will review the current theoretical and evidential basis for its importance. It will then go on to summarise the evidence base for the effectiveness of specific, and common, factors in therapy, and how the three communication systems and epistemic trust can provide a useful framework for understanding what makes therapy effective, and why.

It will highlight the limit of specific factors in explaining between-patient differences in therapy effectiveness, and through the lens of common factors spotlight how epistemic trust may be integral and essential to effective therapy (Fonagy and Campbell, 2017). This is currently a conceptual discussion due to a lack of empirical evidence to date, but I hope to further the existing evidence.

### **The three communication systems**

Fonagy and Campbell (2015a) conceptualise the effectiveness of therapy as being due to three communication systems. Firstly, communication of content, whereby a coherent narrative is co-created between patient and therapist of their difficulties; secondly re-emergence of robust mentalising whereby the patient feels understood, enabling them to relax their epistemic mistrust (elaborated in the next section), and begin to work with the

therapist on considering alternative perspectives; thirdly re-emergence of social learning beyond therapy, whereby the patient uses the knowledge learnt to reconsider and behave differently in their social world.

Therapeutic assessment (formulation, joint discussion of assumptions to test, testing out assumptions with 'experiments' and then discussion on reflection on findings) have been found to restore epistemic trust (Kamphuis and Finn, 2018). These concepts clearly map on the three communication systems.

The three levels of communication, and epistemic trust, have a smaller evidence base, but both of these concepts are the focus of the empirical study of this thesis and so I shall focus on these in order to illuminate what evidence there currently is, and how this informs my hypothesis and empirical study.

### **What is Epistemic trust and why is it important?**

Epistemic trust is thought to be an essential development in social cognition that allows humans to learn and adapt to ever changing social environments (Fonagy & Allison, 2014; Fonagy & Luyten, 2016; Fonagy, Luyten, & Allison, 2015). It is thought that where this trust has been broken, or perhaps was never fully developed in the first place, people may find it incredibly difficult, or even impossible, to trust others as 'a source of knowledge about the world' (Fonagy and Campbell, 2017, p5).

It is thought that the development of epistemic trust occurs through the attachment that an infant develops with a key caregiver or caregivers. Through their interactions with caregivers, the infant learns whether those that are in a position to either harm or care can be trusted. If an infant experiences key caregivers as unreliable, misattuned to their needs, absent, neglectful, or causing of harm to them, it may be that they develop a sense of epistemic vigilance - belief that the social information that others share is likely to be inaccurate and damaging (Sperber et al, 2010).

Epistemic trust likely has significant ramifications for all social relationships. It has been shown that, in order to cooperate with others, it is essential to reach a 'we-ness' (Gallotti and Frith, 2013) - a shared understanding and agreed perception of reality (Tomasello, 2018). This requires mentalising, the ability to understand another's mind as separate from our own, and to understand that others may perceive reality differently from us (Fonagy and Luyten, 2016).

Although these processes are key to all social relationships, it is clear that they are especially crucial between patient and therapist. If we consider the relationship between therapist and patient there are some key similarities between this and that between an infant and an infant's caregiver.

A therapist holds power in a similar way; they can choose when to initiate and end contact with the patient, they set the boundaries of how long the session lasts, where it takes place, whether they respond to contact between sessions and how they do so. Depending

on the type of therapy, they may also decide what is important and deserving attention, and what to ignore.

There are clear parallels with the way in which a caregiver can control their relationship with an infant, especially when they are preverbal. Caregivers similarly choose whether to respond to cries, how much time they spend with the infant, when it is time to feed, go to sleep, play, and be separate. A key part of this interaction is the use of ostensive cues: eye contact, using a special tone of voice, and marked mirroring whereby the caregiver reflects back the emotional state of the infant using exaggerated facial expressions. These are signs that let the infant know that the caregiver is interested in them and their mind which, in them feeling understood and mentalised, helps them to mentalise others (Fonagy and Campbell 2015).

If we consider that a key task of talking therapy is for a therapist to try to understand another's difficulties and help cope with or overcome these difficulties, then the level of epistemic trust a patient has should be highly influential in terms of the effectiveness of therapy (Safran et al, 2011). The worth of a therapists' understanding and thinking is only worth as much as the patient's perceived value of it.

### **What are the developmental antecedents of Epistemic Hypervigilance?**

It is postulated that adversity and deprivation are key antecedents to the development of epistemic mistrust (Fonagy et al, 2019) due to these circumstances creating and even

necessitating a need to avoid mentalising and mental states - perhaps due to the mental load of dealing with the adversity and deprivation. In these circumstances it may be even more important for the individual to focus on themselves, and essentially their own survival. This lack of mentalising results in them feeling persistently misunderstood (Germine et al, 2015., and Kay and Green, 2015).

Parental maltreatment (primarily physical abuse) and parental maladjustment (parental criminality, drug abuse, or alcoholism) were found to be associated with lesser theory of mind capability as an adult (Germine et al, 2015). Where mentalising has not been measured, theory of mind can be a good conduit due to it conceptualising the ability to know that others may have a different perception to their own. Further, strength of maternal attachment has been found to predict acculturation and adverse childhood experiences block this (Venta, 2020).

### **How does Epistemic Hypervigilance affect social learning?**

Social learning is hindered in those with epistemic hypervigilance as they are excessively mistrustful of others and in particular disregard information that others share due to hypermentalising - interpreting others' intentions as malevolent and not to be trusted (Sharp et al, 2013). The sharing of social information in interpersonal relationships is a key human process (Germaine et al, 2015), without which an individual is less able to adapt to life's ever changing circumstances.



Such individuals may be closed off to social information shared within therapy and instead are more likely to perceive it as harmful and thus not integrate it into their belief system (Fonagy et al, 2019).

For individuals who have experienced greater inequality and deprivation the restoration of level three of the communication system (re-emergence of social learning beyond therapy) may be paramount (Fonagy et al, 2019). This is because there is a need for these individuals to be even more sensitive to their social environment due to their dependence on these environments and an increased need (and perhaps hypervigilance) to know whether these systems are supportive.

This theory is of particular importance when considering that racial discrimination is a strong predictor of mental health problems (Clark et al, 1999). It may be particularly pertinent to attend to the level of epistemic trust, and to focus upon improving it within psychological therapy, for individuals with these experiences in order to maximise treatment outcomes.

Thousands of outcome studies and hundreds of meta-analyses have found that the best apportionment of explained variance in psychotherapy outcome is as follows: techniques account for at least 15%, expectancy or placebo effects for 15%, common factors such as the therapeutic alliance for 30%, and the largest source is attributable to patients' extra therapeutic change at 40% (Lambert and Norcross, 2019).

Extra-therapeutic change (changes in the patient's life and circumstances), expectancy (how much they believe the therapy will help) and placebo effects (therapeutic benefit occurring due to receiving a treatment in of itself, not necessarily the benefit of the treatment) clearly have a large impact on the effectiveness of therapy, and should not be discounted. However, this review focuses on the aspects within psychotherapy itself: the specific and common factors.

### **The Dodo bird effect**

Many studies (e.g. Rosenzweig, 1936; Wampold et al, 2002) have found that there is little to no difference in the effectiveness between different therapies. One theoretical explanation of this phenomenon is that therapies work on a common or similar mechanism of change, regardless of the therapeutic modality (Carey, 2011). It may also be that the outcomes used to measure the effectiveness of therapy are not equally relevant to all psychotherapies and so comparison between them is not valid (Shedler, 2020).

## **Epistemic Trust and psychotherapy**

Understanding the influence of epistemic trust on therapeutic effectiveness could provide insights into how we can better personalise therapy to the individual and improve its effectiveness.

When describing specific tools and techniques, this review will identify some key candidate mechanisms, illustrate each and explore how epistemic trust may be key. This review will not provide an exhaustive review of the evidence base for all tools, techniques, and models used in therapy. To do so would take a whole book (if not several!).

## **Specific factors as general psychological processes**

The following discussion is grouped into the general psychological processes that the techniques appear to target, rather than models enumerated individually. Given the evidence of the dodo bird effect this seems the most useful way of examining the varying tools and techniques utilised in psychotherapy.

It is worth noting that throughout a large portion of the literature discussed herein, there is a possible sampling bias relating to the epistemic trust of patients. It is plausible that, in general, patients with high epistemic vigilance are less likely to be included in research. Especially where participation is voluntary, mistrust means these patients are more likely to opt-out/drop out, but may also simply be less represented in therapy overall. I will briefly discuss this later in the review when discussing the patient factors related to the effectiveness of therapy.

### **Specific factors**

- Cognitive restructuring
- Interpretations
- Rupture and repair
- Between session tasks

I will first discuss two examples of specific factors of therapy, those specific techniques that have been found to account for 15% of the effectiveness of therapy (Lambert and Norcross, 2019).

### **Increasing psychological flexibility through cognitive restructuring and interpretations**

A widely employed therapeutic model in the UK is Cognitive Behavioural Therapy (CBT). CBT centres upon the idea that feelings, thoughts, and behaviours are closely interrelated. In depression, it is stipulated that maladaptive thought patterns are developed which result in a person feeling depressed/anxious, and that this feeling leads them to reduce doing things they enjoy which in turn makes them feel worse. The key focus in this therapy is either to target behaviour, to increase the enjoyable activities a person is engaging in (behavioural activation, referred to later the discussion of level three communication), in order that their mood is improved, or to target maladaptive thoughts (cognitive restructuring) in order that they have a lesser effect on mood (Beck, 1964).

## **Cognitive restructuring**

It has been shown that there is a positive correlation between maladaptive thoughts -- termed in this study cognitive distortions - and depressive symptoms, such that when cognitive distortions are reduced, a similar reduction is seen in depressive symptoms (Shirk et al, 2013) as well as in symptoms of PTSD (Ehlers et al, 2021). These effects were large, temporal, reproduced and do seem plausible in terms of the theory behind CBT.

Although this lends support to the idea that decreasing thinking patterns is part of the 'active' ingredient in therapy, it is far from conclusive evidence. Without appropriate controls of other factors that could be influential, it is not possible to conclude that this relationship is causal. Indeed when using Acceptance and Commitment Therapy (ACT) it has been found that there is a relationship between an increase in psychological flexibility that is closely related to a reduction in depressive symptoms, rather than changing maladaptive thinking patterns themselves (Flaxman and Bond 2010). This could suggest that rather than needing to reduce cognitive distortions themselves, it is enough for people to feel less attached to these thoughts as their narrative, but instead as simply thoughts, as with the theory of thought defusion in ACT (Healey et al, 2010). Indeed thought defusion has been found to be effective at reducing emotional distress (Pilecki and McKay, 2012) above that of cognitive restructuring (Larsson et al, 2015).

This increase in psychological flexibility, particularly if it pertains to a more nuanced perception of the intention of others, may enable the patient to relax their epistemic

vigilance enough to begin to consider alternative perspectives, as in level 2 communication. The process of therapist and patient together mapping out how their thoughts, feelings, and behaviours are linked, and joining on this narrative of their problems, may allow the patient to consider the therapist as trustworthy - and safe enough to then begin to consider that the alternative perspective they offer may be of value rather than of harm.

### **Interpretations**

An important tool in psychotherapy, in particular psychodynamic psychotherapy, is the use of interpretations. The therapist suggests an alternative view of what the patient might be sharing, often informed by knowledge they have of behavioural patterns they have used in the past, and their relationships with key attachment figures. It has been found that the frequency of interpretations is not linked to positive outcome (Piper et al, 1993, and Schut et al, 2005) but where those interpretations were rated by an independent observer as being accurate, effectiveness increased. Highly accurate interpretations were predictive of gains made by the next session (Andrusyna et al, 2006).

These results are interesting for two reasons. One of which being their credibility; the temporality and dose-response relationship of accurate interpretations and gains made is good evidence for causality. The other is that these interpretations need to be well attuned to have a therapeutic effect. This makes logical sense, given psychodynamic theory, that the mechanism of change of interpretations is to help the patient to conceptualise their difficulties within the context of their experiences and internal processes.

Indeed, this creating of an alternative view of the self, is something that is shared between both cognitive therapy and psychodynamic psychotherapy, whether through cognitive restructuring, or transference interpretations (Goldfried and Padawer, 1982).

Transference is where key feelings and experiences from formative relationships like caregivers are experienced and played out with other people later in life (Levy, 2009). In psychodynamic theory, transference is an important tool for the therapist to use to try to understand how the patient relates to them, but also how the patient relates to others. By sharing this through interpretations, the patient may become more aware of how the way they act in present time is connected to their formative relationships, and how the assumptions they make about others might be less based in current reality but biased by their previous experiences.

Epistemic trust may interact with this process of increasing psychological flexibility through reducing maladaptive thought patterns, or alternative views of self through interpretations, by attenuating the threshold for what is considered to be reliable information. An accurate interpretation that feels meaningful to the patient may act as an ostensive cue to the patient; that they are thought about and understood. That understanding is reflected back, for them to integrate into their understanding of themselves (Fonagy and Allison, 2015), this consideration of alternative perspectives being part of level 1 communication. This may allow the patient to relax their epistemic hypervigilance and in so doing apply this outside the therapy room, enabling the re-

emergence of social learning (Fonagy's communication system three). Conversely, of course, a patient with high levels of epistemic vigilance may find it more difficult to consider those cues or appraise them as genuine.

It may be that those with low levels of epistemic trust take longer to develop psychological flexibility, or without an appropriate level of epistemic trust developing with the therapist, they do not do so at all.

Here it is important to distinguish between different models of therapy. Although the overlap between cognitive restructuring and the providing of interpretations is clear, in psychodynamic therapy there is a real focus on the relationship between therapist and patient, and particularly on using the transference and countertransference that occurs within the relationship to inform the therapy.

Counter-transference refers to the feelings that the therapist has towards the patient. This may be due to unwanted feelings that the patient projects out on to the therapist, or feelings that the therapist has towards the patient, because something in the patient, or what they have shared, has triggered something within the therapist that connects to their own formative experiences (Walker, 2007).

It may be that therapies that focus on the relationship, like psychodynamic therapy, may be better suited to someone with epistemic vigilance, because it may be necessary to explore more closely the relationship the patient has with the therapist, and therefore



relationships with others, to restore wider social learning. Conversely, such work may feel incredibly threatening to an individual with epistemic vigilance; it may feel too intimate, and too risky, and so in that way it may be that working at a more cognitive level is effective.

Regardless, ensuring that the therapeutic modality can provide a coherent narrative to the patient is of paramount importance as the first stage of the re-emergence of epistemic trust and wider social learning. These treatment decisions need to be person-centred but it may be that assessing epistemic trust, as well as taking into account patient preferences, may facilitate such decisions.

Specific therapy techniques, such as cognitive restructuring and the use of interpretations, may allow the patient to consider alternative perspectives facilitating their move to level three communication. This process and instilling and restoring epistemic trust may enable the patient to then apply what they have developed with the therapist to other relationships in their wider social world.

### **Rupture and Repair**

When the alliance is ruptured (for example by a therapist misunderstanding the patient, or making a mistake, or not being there for the patient because they are off sick), it presents an opportunity for both patient and therapist to share their mind and position (the 'meeting of minds'), which facilitates mentalising and the recovery of epistemic trust through the repair of the alliance. It has been found that there is a significant moderate

association between rupture-resolution processes and better treatment outcomes (Eubanks et al, 2018). Further there is promising evidence that training therapists in the repair of ruptures results in more effective treatment (Eubanks, Goldfried, & Norcross, 2019; Eubanks, Muran, & Safran, 2019). It has also been found that the most influential factors to successful repairs after a rupture are having a strong working alliance, and seeing the therapist as an attachment figure (David-Sela et al, 2020).

It could be suggested that rupture in the therapeutic relationship is the loss of epistemic trust with the therapist, and in order for this to be restored (or repaired) there needs to be a good foundation. In a therapeutic relationship this may be a strong working alliance (the experience of the therapist listening and understanding you in the past) and seeing the therapist as an attachment figure (someone that cares, and can meet your needs).

It may be that for those with epistemic mistrust any ruptures early on in therapy may be particularly detrimental as there has not yet been enough time to develop a shared understanding of their difficulties, and to develop their epistemic trust. It may also be that someone with epistemic mistrust is less likely to see a therapist as an attachment figure, due to difficulties in attachment being a developmental antecedent to epistemic mistrust.

In the context of the three communication systems, establishing the first communication system of a coherent shared narrative and the second of relaxing their epistemic mistrust seems essential in order that repair can occur after ruptures. Further, with this experience

in the therapy, the patient can move onto the third communication system, by applying this social learning as to how to manage rupture and repair in other relationships.

It's worth noting that as in clinical practice, these communication systems are not theorised to always occur in order but instead are reflexive and flexible, with movement happening between stages across therapy.

Despite this, it may be that for effective therapy (and perhaps more so for those with epistemic mistrust), it is important that any ruptures in the relationship do not occur (or are given sufficient time to be repaired if they do occur) before the second level of re-emergence of robust mentalizing. This is in order that a person's epistemic hypervigilance is not raised to such an extent that they can no longer engage meaningfully in treatment.

### **Between session tasks**

A key specific factor in therapy is the importance of between session-tasks; explicitly, but also the learning and consolidation that occurs more implicitly as the understanding that is developed within sessions is used in the person's life.

Burns and Nolen-Hoeksema (1991) have shown that client rates of completion of therapist-suggested self-help homework predict outcome of therapy in cognitive therapy for depression. It is suggested that the potent aspect of these between session tasks are the consolidation of learning, as well as the ways in which these tasks often require people

to engage in activities that are positively reinforcing, and allow them to apply the learning gained in sessions (McAleavey and Castonguay, 2015).

Indeed, Behavioural Activation, whereby people are supported to re-engage with activities that they have previously found to be engaging and enjoyable, has been found to be as effective as full CBT in improving mood (Dimidjian et al, 2006). These techniques also often happen outside of the therapy room so the positive reward is associated with their lives, not just the therapist.

A key specific technique in CBT is behavioural experiments where patients are asked to test out assumptions they have. These experiments are co-created between the patient and therapist, and at first may be carried out together, or the patient will test them independently, and then the results are reflected on in the next session.

A person with a lack of epistemic trust may find it much harder to rely on the expertise of the therapist, and to be willing to take risks and try things out, which may work against the therapeutic goals and result in less effective therapy. Here it can be seen how essential the considering of alternative perspectives in level 2 is, to enable this application to the wider world in level three.

### **Exposure and differential ways to process emotion**

In exposure therapy, patients are encouraged to confront the situations that they are fearful of in order that they are desensitised to the anxiety that they experience. It is

thought that by doing so, they learn that the situations are not as dangerous as their emotions lead them to believe, and that with repeated exposure, a fear response is less associated with the stimuli and therefore that they feel less anxiety. In a large meta analysis such exposure work has been found to result in a statistically reliable improvement in symptoms of OCD in 75% of patients (Fisher and Wells 2005).

This technique allows the patient to test out the learning during therapy but also to experientially learn that the ideas they have about certain things or people may not be helpful or accurate. This then allows the patient to integrate this learning more fully and continue outside of the therapy room to apply this social learning. The experiential learning that occurs during exposure work is a direct expression of level three communication.

### **But those specific effects don't explain everything?**

A meta-analysis of therapeutic effectiveness found that when the 'active' components of interventions were not included in therapy, this did not significantly affect the effectiveness of the therapy (Ahn and Wampold, 2001) and that non directive supportive counselling is as effective as more structured psychotherapy (Cuijpers et al, 2012).

As detailed above, the specific techniques in psychotherapy have been found to account for only 15% of the variance in treatment outcome (Lambert and Norcross, 2019). This suggests that the theorised factors that make the change in therapy, might not actually be the effective component - certainly not in isolation.

### **How about common factors?**

- Engagement
- Formulation and Goal Setting
- Alliance

Common factors are those aspects of therapy that are considered to be common across different therapy models (Huibers et al, 2014), including that a coherent narrative is made of the patient's problems, development of a good therapeutic relationship between therapist and patient, and that both therapist and patient believe in the therapy delivered (Cuipers et al, 2012).

The common factors with the strongest evidence base for their influence are therapist allegiance (how much the therapist believes that the therapeutic modality that they are delivering will be effective, Messer and Wampold, 2006), therapist and patient alliance, and therapist factors (namely adherence, competence, and empathy). These factors were found to explain a high level of variance, 6% (Wampold, 2001., and Luborsky et al, 1999) 5-7% (Martin, Graskie, and Davis, 2000., and Horvath and Symonds, 1991), and 6-9% (Luborsky, McCellan, Disguer, Woody, and Seligman, 1997) respectively.

This next section explores these different common factors, and how they attenuate the effectiveness of therapy. It will then explore how the concept of epistemic trust relates to these factors and is a key underpinning mechanism of the potency of these factors. The common factors elucidate what is facilitatory in effective therapy, but this may be down to

their relationship with and function in epistemic trust; this section explores how these factors facilitate epistemic trust and that this may be the key to effective therapy.

### **Engagement**

In order for therapy to be effective, a patient needs to attend the therapy, and when present engage with the process. Therapy is a collaborative process that the patient must engage with for it to be effective. While this fact is largely self-evident, it is worth addressing how epistemic trust impacts the therapeutic process even before it has begun. As well as its incremental impact on the effectiveness of therapy (as is the general focus of this work), it may also be that disengagement due to epistemic mistrust is a significant barrier for access to services: epistemic vigilance may make a prospective patient wary of accessing psychological support at all.

### **Formulation and Goal Setting**

Formulation is analogous to the 'coherent narrative' that is referred to in the first level of the communication system. Generally a formulation is a theory, informed by the patient's reporting of their lives and experiences, and the therapist's knowledge of the likely impacts of these experiences and how thoughts, feelings, and behaviours are interlinked. Together the therapist and patient create a coherent narrative as to how and why the problem developed, how it continues, and what helps/hinders the problem getting better. In some therapies this may be explicitly mapped out with the patient, while in others this coherent narrative may be more implicitly constructed and referred to over time. As part of this formulation, the therapist and patient think together about what the goals are for

therapy, and with this in mind a treatment plan for therapy is drafted. It has been hypothesised that a focus on goals and tasks is key to restoration of epistemic trust (Folmo et al, 2019). Indeed, collaborative goal setting has been found to improve confidence in the therapeutic process (Goldman, Hilsenroth, Owen, and Gold, 2013). Confidence in the therapeutic process is likely linked to expectancy, which in itself is important given that - as previously stipulated - expectancy (and placebo effects) contribute approximately 15% to the effectiveness of therapy (Lambert and Norcross, 2019).

### **Alliance**

The alliance between therapist and patient refers to the degree of fit in the relationship. It also encompasses the agreement about the goals of therapy, and agreement on the tasks of therapy (Wampold 2015). It has been found in over 200 studies that the alliance is an important factor in therapeutic effectiveness, with better alliances predicting better outcomes, with a medium effect size of 0.75 (Horvath et al, 2011). In their large meta analysis Norcross and Lambert (2019) conclude that the psychotherapy relationship accounts for differences in therapeutic outcome as much as, and probably more than, the psychotherapy treatment method. However, other research suggests that this relationship is only predictive when patients begin with poor life satisfaction, and that a better alliance predicts better life satisfaction after therapy, but no other outcomes (Zilcha-Mano et al, 2018).



This finding highlights the nuance in how we measure the effectiveness of therapy: is it a reduction in a score on a symptom questionnaire, or an improvement in life satisfaction? Unfortunately there is not the space to discuss this here, but it is worth mentioning that the finding by Zicha-Mano et al is not necessarily one that points to the lack of influence of the alliance, instead it may be that the positive benefit of the alliance (and thus the relaxation of epistemic mistrust and restoration of social learning) is better reflected in questionnaires measuring life satisfaction than purely a reduction in self-reported symptoms. Further, that an effective outcome for psychotherapy is not necessarily a reduction in symptoms, but a reduction in the impact that these symptoms have upon functioning. ACT creator Steve Hayes describes this as patients learning to 'FEEL good and live good' rather than 'feel GOOD' (Blackledge and Hayes, 2001). That often therapy is about connecting with difficult feelings and emotions, not avoiding them.

Patient factors that have been found to positively affect alliance are a patient's level of trust (Birkhauser et al, 2017), capacity for attachment and bond (Levy et al, 2018), and the amount of social support the patient has (Coyne et al., 2018; Levin et al., 2012, Probst et al., 2015). A patient's epistemic trust was not explicitly measured in these studies. Interactive factors that have been found to be influential are the client and therapist being from the same racial/ethnic group (possibly related to cultural competence, discussed later), and both having secure attachment styles (Beutler et al, 2006). As previously discussed, difficulties in attachment and bond may be a conduit for low epistemic trust, as the development of epistemic trust is thought to be dependent on the attachment with key caregivers. It is interesting to note that the attachment styles of both therapist and

patient were influential and that perhaps the levels of epistemic trust that a therapist has is likely to interact with that of the patient, affecting the effectiveness of the alliance and therapy.

The specific factor of rupture and repair, and the common factor of alliance, may be of huge importance in the relaxation of epistemic trust and re-emergence of mentalising necessary for a patient to be able to consider alternative perspectives. This may then enable people to start to do things differently outside of the therapy room.

### **Therapist factors**

Therapist factors are those aspects of therapy that are considered to be related to skills and attributes of the therapist. It is estimated that 4.6-6.9% of variance in the effectiveness of therapy is due to therapist factors (Wampold and Brown, 2005). Namely, their competence, flexibility in applying psychological concepts (rather than stringent adherence to a particular model/technique), responsiveness to feedback and ability to meet the needs of the patient. Indeed, there have been found to be larger influential differences between therapists than between different types of therapy (Lambert, 2007). It may be that these therapist factors allow the patient to feel confident in the therapist, and that they have social information that is of worth to them, enabling them to move to level 2 communication - the consideration of alternative perspectives. As previously discussed, a lack of meeting the needs of the individual is a key antecedent to developing low epistemic trust and so this might be why doing so in therapy is so important.

## **Adherence**

### **Flexibility in applying psychological concepts/not stringent adherence to a particular model/technique**

This fits with evidence that found that therapists who adhered strictly to a particular therapeutic model tended to have worse effectiveness, due to inflexibility causing more resistance in the patient (Wampold, 2015). However, it is worth noting that the effect sizes for adherence and competence were small. It is likely that the influence of adherence has a complex relationship with other factors. This may be because without the therapist employing flexibility, the narrative created to explain the patient's difficulties might not feel co-created but also not be a good fit. Without this, it may prevent the patient from relaxing their epistemic trust enough to move to the second level, of robust mentalising and considering alternative perspectives.

## **Competence**

There is mixed evidence as to the importance of therapist competence on the effectiveness of therapy and it is a vague area when different measures of competence are used between therapies and studies. It has been found that when using CBT, therapist competence is related to therapy outcome (Kuyken and Tsvirikos, 2009), whereby higher therapist competence is related to better treatment outcome. However, it has also been found that in CBT both competence and alliance (discussed in level 2; common factors) were related to treatment outcome but only alliance was found to have an independent effect; competence was not found to have a significant effect when controlling for the

effects of the alliance (Trepka et al, 2004). Indeed, the therapist's ability to develop a strong therapeutic alliance could be said to be a key part of their competence!

With these mixed results, it is difficult to come to any firm conclusions regarding the influence on competence on the effectiveness of therapy. It may be that competence in itself is important in showing the patient that the therapist is able to help them (in particular at the start of therapy in co-creating a meaningful narrative, level 1 communication), allowing them to relax epistemic mistrust and the progression to level 2 communication. Perhaps it is more likely, due to the stronger evidence base for the influence of a strong therapeutic alliance, that it is this that is a key part of a therapist's competence that contributes to its effectiveness.

### **Cultural competence**

It may be that cultural competence specifically may be of more importance. Imel et al (2011) found that outcomes were worse when therapists were treating people from a different ethnic background to their own. Further, some therapists were much more effective at treating white patients, and some much better at treating those who were from an ethnic minority.

I have previously discussed the importance of fit in creating a coherent narrative and if therapists are not adaptive to a patient's culture it is unlikely that a narrative is going to feel co-created and of worth, and so there is no relaxation of epistemic vigilance. The influence of experiences of racism and discrimination of minority ethnic groups when

seeing a white therapist may also influence whether epistemic trust is developed/restored and whether movement through the communication systems occurs.

### **Empathy**

As would be expected, the level of client rated empathy (of their therapist) has been found to be positively related to therapy outcome (Kutz and Grummon, 1972), and those therapists with lower levels of empathy were found to have worse outcomes with their patients (Lafferty et al, 1989). In a recent meta analysis of over 6000 participants it was shown that therapist empathy is a moderately strong predictor of therapy outcome (Elliott et al, 2018).

It is likely that lower levels of exhibited empathy signal to the patient that they are not understood (level 1) and may prevent them from engaging meaningfully in therapy, perhaps by contributing less to the co-creation of a narrative (or formulation) and moving on/engaging fully in the later stages of communication.

It may be that therapist factors are more influential when interacting with a patient with low epistemic trust for whom sensing empathy is even more important. Patients may be hypervigilant for signs of a lack of empathy/understanding due to their experiences of being misunderstood by those in a caring role in the past.

**Patient factors; factors that contribute to lack of engagement, drop out, and less effective therapy**

- Trait like e.g. ET, personality type, attachment,
- State like e.g. anxiety levels, motivation

Patient factors are those aspects of the patient that affect the effectiveness of therapy. Epistemic trust is technically one such factor, and likely plays a role in other factors assessed herein.

It has been found that a patient's levels of motivation, personality characteristics, and how active they are in treatment decisions and tasks is associated with effective therapy (Bachelor et al. 2007). It may be that these factors are closely interlinked with epistemic trust, in that those with lower epistemic trust are likely to have lesser levels of motivation due to a scepticism of the expertise someone can offer, as well as perhaps operating in a mode of learned helplessness: that others do not help and that their trying is futile..

Personality characteristics such as lack of trust in others, hypervigilance to threat, being quick to anger as a protective mechanism to reduce the chance of harm from others, may also be patient factors that are highly correlated with a lower level of epistemic trust. Similarly, patients with a lower level of epistemic trust may be less likely to be engaged and take an active stance in therapy due to not feeling that this effort and engagement will be mirrored and matched by the therapist.

However, the influence of these factors in of themselves should not be underestimated, the relationship between these patient factors and epistemic trust has not yet been empirically tested

Patients with the above patient factors are less able or less willing to work on a joint understanding of their problems as in level 1 communication. This may result in a lesser trust or alliance with the therapist, which prevents the re-emergence of mentalising allowing them to try the specific techniques the therapist suggests (as in level 2), and of course without this cannot move into level three where this learning is expanded into their social world.

Another patient factor that could be important is the severity of their mental illness when starting therapy. There is understandable cynicism regarding the effectiveness of therapy with more severe mental health difficulties, and it might be assumed that patients with more severe mental health problems would be less able to meaningfully engage in therapy. However, it has been found that less severely depressed patients were no more likely to have reduced depressive symptoms after a low intensity CBT intervention, than more severely depressed patients (Bower et al, 2013). This reinforces the evidence that what is important is a patient's level of epistemic trust, and therefore their ability (with the therapist's support) to move through the different systems of communication. However, a clear confounding factor is whether those with epistemic trust are likely to have more severe mental health difficulties. As this research base is emerging, there is not yet

empirical evidence to support this theory, but I will explore this in the empirical paper of this thesis.

Therapist and patient factors underpin a patient's ability not just to continue to engage in therapy but whether they even attend the first session. Patients that drop out of therapy are often not included in effectiveness analysis because of the complexities of conducting an analysis with incomplete data. An effective remedy for missing data is an intention to treat analysis but this is only used in 50% of psychotherapy research (Huhn et al, 2014). Further, those with low epistemic trust may be systematically under-represented (in studies and psychological services more broadly); as discussed above, epistemic vigilance may make a prospective patient wary of accessing psychological support at all.

### **Trait-like and state-like differences**

A useful conceptualisation of patient factors is whether they are trait-like or state-like differences (Zicha-Mano, 2017). Trait-like factors refer to reasonably stable factors (like personality characteristics) that the patient comes to therapy with, whereas state-like factors are those that are more changeable during therapy (e.g. anxiety levels during different sessions). A patient may come to therapy with a low level of epistemic trust (epistemic vigilance), a trait-like attribute, but the therapeutic alliance that is developed in therapy, a state-like attribute, can fluctuate and even modify trait-like attributes, allowing them to engage in the specific and common factors that have been found to contribute to the effectiveness of therapy. Indeed, it has recently been found that trait-like factors, such



as attachment style, account for up to 45% of the quality of a relationship (Joel et al, 2020).

Patients with lower levels of epistemic trust may need longer to develop a shared ownership of the therapy with the therapist (as in level 1 communication) and fully join with them - what Gallotti and Frith (2013) term the 'we mode' and Tuomela (2005) refer to as 'jointly seeing to it'. This suggests that adapting therapies according to epistemic trust can have positive outcomes.

Specific factors of therapy such as engagement, formulation, and goal setting may create a coherent narrative that allows the patient to feel heard and understood enough to move to level 2 communication. This act of creating an understanding of the patient's difficulties together, may allow the patient to move into a space where their epistemic mistrust is relaxed and they can then consider alternative perspectives.

### **Extra Therapeutic Change**

We must appreciate that not all positive change stems from therapy! As previously described, it is estimated that extra therapeutic change - factors outside of the therapy room that happen in the patient's life - explain 40% of the variance in how effective therapy is. While some changes may clearly be unrelated to progress in therapy, it should be noted that in many cases there may not be a clear distinction; many therapies relate to a patient's relationships and social world, and effective therapy may be a catalyst to changes in it. Indeed, level three communication describes the application of learning

from therapy to the wider social world; the reason that this may be an important skill is its power to improve otherwise 'extra-therapeutic' factors.

### **Three communication systems necessary for effective therapy**

It is clear how the first communication system can be integral to effective application of specific factors: the general psychological processes of cognitive restructuring, considering of alternative interpretations, and rupture and repair. Rupture and repair may also be important for the second communication system, and contribute to the common factor of therapeutic alliance. Between session tasks and exposure may be particularly important for the third communication system, of consolidation and generalisation of therapeutic learning into the wider social world.

It has been illustrated how the concept of epistemic trust may be a key underlying factor in what makes therapy effective. It may be that the specific and common factors of what makes therapy effective are necessary but not sufficient without the reemergence of epistemic trust. These factors - building alliance and the patient's witnessing of results and the therapist's competence - also enable their trust in the therapist and the movement to level 2 and progressively level three communication.

### **Hypotheses**

I have tested these ideas in my empirical paper that follows this review. My hypotheses are as follows:

1. Those with lower levels of ET at baseline will have more severe depression and/or anxiety as measured by a higher score on the PHQ-9, and/or BDI II, and/or GAD-7, at baseline.
2. Those who were born outside of England, or who are of a black, asian, middle eastern, or mixed ethnicity will have a lower ET score at baseline.
3. Epistemic trust score and mentalisation score will improve between pre and post therapy within IAPT services and these changes will be correlated.
4. Patients with lower levels of epistemic trust will have less symptom improvement.

## **Conclusion**

There is evidence of the importance of specific factors (specific techniques that nurture cognitive flexibility, e.g. cognitive restructuring and interpretations) and common factors (factors common across therapies, namely alliance, adherence, competence and empathy), as well as patient factors (motivation, personality characteristics, and how active a patient is in the therapy).

Epistemic trust is a key underlying factor that is necessary to effective therapy, the specific and common factors contribute to the restoration of epistemic trust.

The three communication systems frame the importance of these factors, and epistemic trust pins the specific and common factors together and is the mechanism of change underpinning the three communication systems. As such, assessing epistemic trust could be key to personalised psychotherapy .

I will test out key proposals set out in this review in my empirical paper, namely; whether lower levels of epistemic trust is associated with more severe mental health difficulties, whether key demographics (that are associated with the developmental antecedents of epistemic mistrust) are correlated with participants with epistemic mistrust pre therapy. whether therapy within IAPT improves epistemic trust, and whether those with lower levels of epistemic trust pre therapy have symptoms that improve less post therapy.

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## **Part 2: Empirical Paper**

### **Exploring the influence of pre-therapy epistemic trust levels on the effectiveness of therapy for mild to moderate common mental health difficulties**

## Abstract

**Background:** There is emerging evidence that a key factor in therapeutic effectiveness is epistemic trust: put simply, the capacity of an individual to trust that others may have benevolent/supportive intentions and therefore take on any information from others that may be helpful for them. The evidence base in this area is limited. Furthering knowledge regarding what factors improve the effectiveness of therapy can be highly impactful in terms of financial efficiency as well as improving the lives of those who experience mental health difficulties. As such, we aimed to explore the relationship between patient levels of epistemic trust pre-therapy with therapeutic effectiveness. This included examining whether a lower epistemic trust score pre-therapy is associated with a higher symptom score pre-therapy, whether the demographic factors of place of birth and ethnicity predict pre-therapy epistemic trust score, whether epistemic trust levels change post-therapy, and whether pre-therapy epistemic trust score was related to symptom score change between pre and post therapy. We also examined whether mentalising capacity changed after therapy, and whether this change was related to changes seen in epistemic trust.

**Methods:** Adults diagnosed with a depressive and/or anxious mental health difficulty within two Improving Access to Psychological Therapy (IAPT) services participated in the study. Participants completed a demographic questionnaire, The Epistemic Trust Scale (ETS), The Mentalization Questionnaire (MZQ), and the Beck Depression Inventory (BDI-III) pre-therapy. Participants completed the Patient Health Questionnaire - 9 (PHQ-9), and the General Anxiety Disorder - 7 (GAD-7) pre-therapy and at every therapy session. Some participants completed the pre-therapy outcome measures post-therapy. Linear

regression was used to investigate the relationship between pre therapy and post therapy levels of the concepts discussed, as well as whether pre-therapy levels affected the effectiveness of therapy.

**Results:** Pre-therapy it was found that, on average, lower ETS total scores, and lower ETS for therapists scores, were moderately correlated with more severe symptoms on the PHQ-9 and BDI II. Similarly lower ETS for others scores, on average were moderately correlated with PHQ-9 and BDI II, and weakly with GAD-7 scores. Neither of the demographic factors, of being born outside of England and/or of being of a black, asian, middle eastern, or mixed race, were significantly associated with ETS scores. Epistemic trust total scores, and both subscale scores, significantly improved after therapy within IAPT services. These were medium sized effects. Scores on the MZQ did not significantly improve after therapy and score change on the MZQ after therapy was not significantly associated with changes in ETS score.

Those with a lower level of total ETS and ETS for therapists were found to have significantly less depression and anxiety symptom improvement on the BDI II and GAD-7. Only having a lower level of ETS for others was associated with less symptom change on the PHQ-9, this effect was not seen on the BDI II or GAD-7. When controlling for symptom severity, the association between pre-therapy ETS for others and symptom change on the PHQ-9 did not remain. Comparatively, it was found that for the BDI II, pre-therapy ETS total score increased the explanatory power of the model by 18.5%. Compared to pre-therapy symptom severity alone.

**Discussion:** As hypothesised, it does seem that there is a relationship between epistemic trust and mental health symptom severity, where a lower level of epistemic trust is associated with more severe mental health difficulties. Therapy within IAPT services seems to improve epistemic trust levels yet this does not seem to be mediated by changes in mentalisation ability. Further, those with higher levels of epistemic trust had greater improvement in their mental health symptoms, as measured on the BDI II and GAD-7. The same improvement was not seen on the PHQ-9.

## **Common Mental Health Difficulties**

The National Institute of Clinical Excellence (NICE, 2021) defines common mental health difficulties (CMDs) as those that affect over 15% of the UK population at any one time. Currently this umbrella term refers to depression and anxiety disorders including panic disorder and Obsessive-Compulsive Disorder (OCD), phobias, and Post-Traumatic Stress Disorder (PTSD).

The last national survey of mental health disorders was conducted in 2014, and found that 17% of the UK population had a common mental health disorder (Adult Psychiatric Morbidity Survey ((APMS)), 2014) - in other words, 1 in 6 adults. Generalised anxiety disorder was the most commonly identified CMD in 2014, followed by depressive episodes (Baker, 2020).

The prevalence of CMDs presents a challenge for the healthcare system, and as such effective and efficient treatment is essential.

## **The Improving Access to Psychological Therapy (IAPT) Programme**

The IAPT programme is the UK's 'stepped care' approach to delivering therapy for mild to moderate common mental health difficulties. Simpler first-line treatments, such as guided self-help (based on Cognitive Behavioural Therapy ((CBT)) principles) and computerised CBT, are initially offered, and are generally delivered by psychological wellbeing practitioners (PWPs, psychology graduates with mental health training).

Only those who do not (or are unlikely to) benefit are offered more intensive support with more experienced therapists - for example, through high intensity CBT.

IAPT services are in high demand, in 2020/21 there were 1.67 million referrals to IAPT services in England (NHS Digital, 2020-2021) and on average an individual would receive 7.5 sessions. In 2020-2021 (more recent data is not yet available) CBT and Guided self-help together accounted for almost two thirds of all therapy, and the highest rates of therapy-based recovery and improvement were for Cognitive Behavioural Therapy (45.2 percent and 61.2 percent respectively) and Counselling for Depression (46.8 percent and 60 percent). (NHS Digital, 2020-2021).

These findings show that even for the most effective IAPT treatments, 50% of IAPT patients are not making a recovery from their CMD and approximately 40% do not see any improvement in their symptoms.

Improving the effectiveness of therapy is a national health concern when considering the negative consequences of such difficulties such as increased risk for long term disability, and mortality (Prince et al, 2007).

### **Therapeutic Effectiveness**

Therapeutic effectiveness is not clearly determined by a singular variable, and in fact the specific therapeutic techniques employed have been found to have lesser significance to outcomes than the common factors shared between techniques (Lambert and Norcross



2019). In many studies, the difference in effectiveness between specific therapies has been small or negligible (e.g. Rosenzweig, 1936; Wampold et al, 2002).

Effectiveness can otherwise be attributed to extra-therapeutic change and placebo/expectancy (40% and 15% respectively according to Lambert and Norcross 2019), but it is clear that common factors - such as therapeutic alliance - play a significant role. As explored in the conceptual introduction, the epistemic trust of a patient may be fundamental to the development or effectiveness of these common factors.

### **Epistemic Trust**

In order to learn from the social environment, a person must be able to trust: that the information given is of value and personal relevance, that the person delivering it can be trusted, and that information is worth retaining for application in other situations. A person's epistemic trust describes their willingness or ability to trust in this way (Fonagy et al, 2015).

It has been suggested that the development of epistemic trust is key in social cognition, without which an individual is less able to adapt to life's changing circumstances (Germaine et al, 2015). It may be that those with lower levels of epistemic trust are more likely to develop mental health difficulties due to these deficits in adaptation. Indeed it has been found that in a population of inpatient adolescents, using attachment outcome measures as an approximation for epistemic trust, lower levels of epistemic trust were associated with Borderline Personality Disorder symptoms (Orme et al, 2019).

Sperber et al (2010) theorise that epistemic trust is developed through an infant's interactions with caregivers. Namely, that an infant's experiences of caregivers as reliable and attuned to their needs allows them to develop that trust - in a process that mirrors the development of secure attachment.

It is thought that those who do not have these experiences – those who experience caregivers as absent, neglectful, and misattuned to their needs, and particularly those who experience adversity and deprivation – may develop epistemic *mistrust* or vigilance (Fonagy et al, 2019). Indeed experiencing adversity early in life has been associated with deficits in social learning (Hanson et al, 2017). Individuals with these experiences may be more likely to hypermentalise; perceive the social information that others share to be inaccurate and even harmful (Sharp et al, 2013).

The systemic social adversity associated with having a minoritised identity may have an impact on a person's social experience in a way that engenders mistrust. For example, the systemic racism experienced in England by a person of colour - including by way of institutional prejudice - may encourage the development of epistemic mistrust towards peers and healthcare professionals.

In England, Black African and Pakistani individuals were found to be at a higher risk of a first episode of psychosis than white individuals (Kirkbride et al, 2017) and in Sweden migrants living in an area with lesser migrant density were more likely to develop psychosis (Dykxhoorn et al, 2020). It may be that those living in England, with

marginalised identities such as being in the minority in terms of ethnicity and migration, have lower levels of epistemic trust.

A patient with lower levels of epistemic trust may not find therapy as effective (Safran et al, 2011) because mistrust of the therapist and the information they impart may impede a patient's ability to take on that information, and apply learning from the therapy room elsewhere. Indeed, it is thought that the re-emergence of epistemic trust may be a final common pathway to the effectiveness of psychotherapy (Knapen et al, 2020).

Although Knapen and colleagues specifically focus on this relationship for people diagnosed with personality disorders, this claim is not supported by empirical evidence (due to the dearth of evidence on this topic, rather than the opposite being found). Although the experience of early adverse relationships is found to be more common in those diagnosed with a personality disorder than those without (Horwitz et al, 2001) it has also been found that over 50% of adults have had these experiences (Felliti et al, 1998). As such, the examination of the relationship between ET and treatment outcomes within those who have been diagnosed with CMDs, is warranted.

It may be that those with lower levels of epistemic trust need longer for therapy to be effective. Those with lower levels of epistemic trust have previously been found to have a slower rate of depression symptom decline (Wickham et al, 2019).

## **The Three Communications System**

This theory posits that the effectiveness of therapy depends on three key processes; the communication of content, the re-emergence of robust mentalising, and finally the re-emergence of social learning beyond therapy (Fonagy and Campbell, 2015). It is hypothesised that the underlying mechanism of the three communication systems is the restoration of epistemic trust and that the movement through each stage allows patients to relax their epistemic vigilance to the extent that they are fully able to engage and make most use of the learning from therapy.

These communication systems can be approximately mapped on to therapeutic techniques such as the co-creation of a formulation of difficulties, the importance of a good therapeutic relationship, therapist skills of empathy and warmth, and behavioural experiments (particularly in the third communication system).

## **Rationale**

We propose that epistemic trust is a key component in effective psychotherapy. Due to the importance of epistemic trust to social cognition, and thus how an individual's ability to cope with life's changing circumstances may be affected by having epistemic mistrust (Germaine et al, 2015), it may be that those with lower epistemic trust have more severe mental health symptoms. Due to the theorised adverse effects of diversity and deprivation on epistemic trust (Fonagy et al, 2019), it may be that those with marginalised identities are less likely to have sufficient levels of epistemic trust. Further, it seems likely that

epistemic trust will improve after therapy within IAPT services, given its theorised influence in effective therapy. Finally, if, as theorised, epistemic trust is so integral to effective therapy, we propose that lower epistemic trust pre-therapy will be associated with lesser improvement post therapy.

Although the research to date has predominantly discussed the influence of epistemic trust and severe mental health disorders, it seems important to also examine this relationship in CMDs too. This is particularly pertinent given the increasingly stricter criteria for referrals to be accepted by secondary care services and the likelihood that those with more complex difficulties are now being seen within primary care settings, like IAPT.

There has been limited research to date exploring the influence of epistemic trust on effectiveness of therapy. Improving our understanding of epistemic trust's influence could be powerful in the development of more personalised and effective therapy.

## **Hypotheses**

1. Those with lower levels of ET at baseline will have more severe depression and/or anxiety as measured by a higher score on the PHQ-9, and/or BDI II, and/or GAD-7, at baseline.
2. Those who were born outside of England, or who are of a Black, Asian, Middle Eastern, or mixed ethnicity will have a lower ET score at baseline.

3. Epistemic trust score will improve after therapy within IAPT services.
4. Patients with lower levels of epistemic trust will have less improvement in symptom/functioning associated with the therapy. We predict that changes in capacity for mentalisation will mediate this effect.

## **Methods**

### **Participants**

The study received ethical approval from the London Queen Square Research Ethics Committee (REC number: 16/LO/0077, IRAS project ID: 161423, and informed consent was obtained from all participants before being included in the study.

305 participants, aged 18 to 69, were recruited to take part in the study. Participants were recruited from the IAPT services of two NHS trusts. Research Assistants employed by the trusts contacted eligible clients on the waiting list for one-to-one talking therapies via telephone and/or email and sought consent to send their contact details to the study team, who contacted them via telephone and/or email to discuss participation in the study further.

Participants needed to have completed an assessment and be on the waiting list for talking therapy for depression or anxiety disorder within the two IAPT services, in order to be included. Participants also needed to be fluent in English (as all study materials and questionnaires were in English). Exclusion criteria for the study were; a historic or current

diagnosis of one or more neurological disorders and diagnosis of a learning disability requiring specialist educational support.

Participants finished the study once they had completed their talking therapy sessions (or when they withdrew, whichever was sooner). Any participants who reported

Those beginning therapy before completing the study measures were excluded from the analysis.

Participant characteristics are summarised in table 2.

From the 305 participants recruited, 26 were excluded from analysis due to them not having completed the Epistemic Trust Scale, or not having completed the PHQ-9 and GAD-7. 124 participants withdrew or were noted as drop outs from the study (after 3 attempts to chase). The study used a longitudinal, repeated measures observational design. Depression symptom severity, epistemic trust and mentalisation capability were measured prior and post therapy within an “Improving Access to Psychological Therapies” (IAPT) setting. A single group of adults with MDD or anxiety disorder was used.

## **Treatments**

As described in the introduction, IAPT services offer a stepped care approach and deliver guided self-help, low and high intensity CBT and counselling. Generally these are short term therapies, with the number of sessions offered ranging from 6-16.

In this study the mean number of sessions received was 14.14 (SD=5.56, N=165), over 6 more than the national mean of 7.5 (NHS Digital, 2020-2021).

## **Measures**

### ***PHQ-9***

The Patient Health Questionnaire 9 is a self administered scale to measure depressive symptoms. It asks about a patient's experiences over the prior two weeks. It has good sensitivity and specificity (88% for both) (Kroenke et al, 2001). A higher score indicates greater depression severity.

### ***GAD-7***

The General Anxiety Disorder 7 is a self administered scale to measure anxiety symptoms, It similarly asks about a patient's symptoms over the prior two weeks. It has good sensitivity and specificity (80%+ for both) (Spitzer et al, 2006). A higher score indicates greater anxiety severity.

### ***The Epistemic Trust Scale (ETS) (see Appendix 1)***

The ETS (Luyten et al, under development) is a newly developed self-report scale that measures the current level of epistemic mistrust an individual has for psychotherapists and others more generally. The measurement produces two subscales for mistrust



pertaining to each of these aforementioned groups with 12 statements in each, such as “I think my psychotherapist would always be honest with me” and “If you put a lot of faith in people, you will get hurt”. Individuals are asked to indicate how much they agree with this statement by choosing one of seven options ranging from strongly agree to strongly disagree. Epistemic mistrust is given as a continuous score between 12 and 84 for each subscale, with higher scores indicating higher levels of epistemic trust. To date, the creators have not suggested a “cut off” for quantifying whether an individual’s levels of mistrust are considered low or high as normative data has not yet been collected. This measure is currently being developed and tested at the Anna Freud Centre and so its psychometric properties have not yet been fully established.

### ***BDI-II***

The Beck Depression Inventory is the gold standard instrument for measuring depression. It has 21 items and asks respondents to think about their current symptoms, not over the past x number of days or weeks (Beck and Steer, 1993). It has good sensitivity and specificity (83.3% sensitivity, 86.8% specificity) (Park et al, 2020). A higher score indicates greater depression severity.

### ***Demographics Questionnaire***

In this study we asked participants to provide their gender, age, place of birth, and ethnicity.

## **MZQ**

The mentalisation questionnaire is a self administered 15 item scale that aims to measure mentalising capacity (Hauser et al, 2012). Items include ‘If someone yawns in my presence that is a reliable indicator that he is bored in my company’ and ‘I only believe that someone really likes me a lot if I have enough realistic proof for it (e.g., a date, a gift or a hug).’. This scale uses a Likert scale from 1 (no agreement at all) to 5 (total agreement), so scores can range from 15-75. A higher score indicates greater mentalising capacity. Internal consistency has been found to be good (Riedl et al, in press).

## **Design**

Four hypotheses were tested. Please see Table 1 below for further details regarding the independent and dependent variables, and the statistical tests used.

**Table 1**

*Summary of the statistical tests performed for each hypothesis*

Hypothesis	Independent Variable(s)	Dependent Variable(s)	Statistical Test(s)
1	Baseline ETS Total Baseline ETS Therapist Subscale Baseline ETS Others Subscale	Baseline PHQ-9 Baseline BDI II Baseline GAD-7	Two-Tailed Pearson Correlation
2	Place of Birth Ethnicity	Baseline ETS Baseline ETS Therapist Subscale Baseline ETS Others Subscale	Independent T-Tests
3	Baseline ETS	Post-Therapy ETS	Paired Samples T-Test

	Baseline ETS Therapist Subscale	Post-Therapy MZQ	Wilcoxon Signed Rank Test
	Baseline ETS Others Subscale		
	Baseline MZQ		
4	Baseline ETS	PHQ-9 Pre/Post Change	Hierarchical Linear Regression
	Baseline ETS Therapist Subscale	BDI II Pre/Post Change	
	Baseline ETS Others Subscale	GAD-7 Pre/Post Change	

*Note.* For brevity, this table summarises the variables used in each hypothesis; in each case the noted tests were run multiple times to test each combination of independent/dependent. In hypothesis 3, Wilcoxon Signed Rank Test was only used with the baseline MZQ variable due to it not being normally distributed. This is discussed further in the results.

## Procedures

The above measures used in the study were part of a larger study on MDD (“Major Depressive Disorder – the social brain study”). All the measures outlined above were completed by participants online using the database system “POD”, including the consent form for the study. This system allowed for participants to complete questionnaires at their own pace, rather than in one session and assigned participants ID numbers to anonymise their data.

We changed the protocol in February 2020 so that the ETS, MZQ, and BDI II were completed both before and after therapy. This was implemented so that we could explore any changes in these concepts after therapy sessions. 51 participants completed the ETS and BDI II, and 56 completed the MZQ, both before and after therapy. Although changes

in depression would be picked up by the PHQ-9, we included the BDI II as a gold standard instrument.

PHQ9 and GAD-7 scores were collected at assessment and in all therapy sessions ,as part of usual IAPT practice. These scores were shared with the research team with consent from the participants.

The larger study had three components; the initial battery of questionnaires completed post assessment and pre-therapy, an online trust game (not analysed for the purposes of this study), and the follow up component (consisting of several questionnaires not included in this study). The approximate total time estimated for participants to complete all aspects of the study was 3 hours; 2 hours for the initial battery, 40 minutes for the follow up component and 20 minutes for the trust game. Participants who completed all three components of the study were reimbursed £25 for their time, which equates to approximately £8.33 an hour.

The participant payment was increased to £30 in February 2020, after introducing the completion of the ETS, MZQ, and BDI at the end of IAPT treatment, to reflect the extra time taken. It was estimated that these measures took half an hour to complete raising the total time to 3.5 hours, an hourly rate of £8.57.

## **Results**

Approximately two thirds of the sample were under 33, close to a quarter were between 24 and 49, and only 5% were over 58. 76% of the sample were women, 24% were men.

69% of participants were born in England. 79% of the sample were of black, asian, middle eastern, or mixed ethnicity.

**Table 2**

*Age of the sample*

<b>Age group</b>	<b>Total</b>	<b>Percentage</b>
18-25	61	37%
26-33	59	36%
34-41	19	11%
42-49	16	10%
50-57	9	5%
58-65	1	0.6%
65+	1	0.6%
<b>Total</b>	<b>166</b>	

## **Data Analysis**

Statistical analysis was conducted using SPSS version 27.0.

Internal reliability of unvalidated measures were conducted. The internal reliability of the ETS was 0.810, indicating good internal reliability. The internal reliability of the MZQ was 0.804, also indicating good internal reliability.

Tests for normality were conducted prior to analyses. The variables of pre/post therapy score difference on the BDI II, pre-therapy ETS others score, post-therapy ETS others score, post-therapy MZQ score, and pre/post therapy MZQ difference were found to be

not normally distributed. Thus, non-parametric alternative statistical tests were used when analysing these variables (further details can be found with the specific analyses). A full breakdown of normality tests can be found in Appendix 2.

Pearson correlations were conducted to examine the relationship between pre-therapy ETS score and severity of mental health difficulty score (on the PHQ-9, GAD-7, and BDI II), and the relationship between pre-therapy ETS Score and pre-therapy MZQ score. For non-normally distributed variables Spearman's Rho correlations were conducted.

Paired samples t-tests were conducted to compare the mean ETS score pre-therapy and mean ETS score post-therapy, the mean MZQ score pre-therapy and mean MZQ score post-therapy. For non-normally distributed variables Wilcoxon Signed Rank tests were conducted.

Independent t-tests were conducted to compare the mean ETS score pre-therapy between participants according to ethnicity and place of birth. For non-normally distributed variables Mann Whitney U tests were conducted.

A hierarchical linear regression was conducted to explore whether pre-therapy ETS Score was related to pre-post therapy score difference on the PHQ-9, GAD-7, and BDI II (ie. measuring symptom improvement).

The relevant data was tested for any violations of the assumptions of linear regression; linearity (using probability plots), multicollinearity (using the variance inflation factor (VIF)), limited influence of outliers (using Cook's distance), and homoscedasticity (by examining scatterplots).

Probability plots demonstrated that the data was linear, the VIF factor was insignificant for all variables (indicating no multicollinearity), all Cook's distance values were insignificant, indicating limited influence of outliers, and scatter plots showed that the assumption of homoscedasticity was met.

The difference in scores between pre and post therapy on the BDI, and pre-therapy ETS others subscale scores, were not distributed univariately, as such log transformations were performed on both. All other variables were found to be univariately distributed.

**Table 3**

*Descriptive statistics of the ETS pre and post therapy, including subscales*

<b>Measure Pre/Post Therapy</b>	<b>Measure range</b>	<b>Range of sample</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>
Pre ETS	24-168	59-139	103.68	16.75	158
Pre Therapist ETS	12-84	28-73	55.96	9.92	158
Pre Others ETS	12-84	25-70	47.72	8.89	158
Post ETS	24-168	69-149	108.70	19.08	51
Post Therapist ETS	12-84	28-74	59.00	11.38	51
Post Others ETS	12-84	33-81	49.70	10.45	51

**Table 4**

*Descriptive statistics of the MZQ pre and post therapy (15-75)*

<b>Measure Pre/Post Therapy</b>	<b>Range of sample</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>
Pre MZQ	15-73	40.18	11.01	164
Post MZQ	19-69	41.20	11.73	56

**Table 5**

*Descriptive statistics of the BDI II pre and post therapy (0-63)*

<b>Measure Pre/Post Therapy</b>	<b>Range of sample</b>	<b>Mean</b>	<b>Score severity</b>	<b>SD</b>	<b>N</b>
Pre BDI II	1-61	27.03	Moderate	12.40	161
Post BDI II	0-50	16.69	Mild	14.72	51

**Table 6**

*Descriptive statistics of the PHQ-9 and GAD-7 pre and post therapy*

<b>Measure Pre/Post Therapy</b>	<b>Measure range</b>	<b>Range of sample</b>	<b>Mean</b>	<b>Score severity</b>	<b>SD</b>	<b>N</b>
Pre PHQ-9	0-27	2-25	13.26	Moderate	6	158
Post PHQ-9	0-27	0-23	7.58	Mild	6.33	158
Pre GAD-7	0-21	3-21	13.66	Moderate	4.73	158
Post GAD-7	0-21	0-21	6.79	Mild	5.46	158

The mean of scores on all of the depression and anxiety symptom outcome measures (the PHQ-9, GAD-7, and BDI II) decreased from being in the moderate range pre therapy, to the mild range post therapy.



On average, the ETS and MZQ scores increased after therapy, although for the MZQ this was only marginally (by 1.02).



## **Hypothesis 1**

### ***Two Tailed Pearson Correlations of Baseline ETS and Baseline symptom measures***

It was hypothesised that those with a lower ETS Score would score higher on the symptom outcome measures. A two tailed Pearson correlation was conducted to explore the relationship between baseline ETS score and baseline symptom score. This was conducted for the PHQ-9, BDI II, and GAD-7. Lower baseline ETS scores were moderately correlated with higher symptom scores on the PHQ-9,  $r(156) = -.49, p=.001$  and the BDI II,  $r(159) = -.46, p=.001$ . Patients' baseline ETS score was not correlated with GAD-7  $r(156) = -.07, p=.650$ .

## **ETS Subscales**

### ***ETS Therapist Subscale***

Lower baseline ETS for therapist score was moderately correlated with higher symptom scores on the PHQ-9,  $r(156) = -.296, p=.000$ , and BDI II,  $r(159) = -.328, p=.000$ . Patients' baseline ETS therapist subscale score was not correlated with their GAD-7 score,  $r(156) = -.117, p=.140$ .

### ***ETS Others Subscale***

As pre-therapy ETS Others subscale scores were not normally distributed, a Spearman Rho correlation was conducted.

Lower baseline ETS score for others was moderately correlated with higher symptom scores on the PHQ-9,  $r(156) = -.336$ ,  $p=.000$ , and BDI II,  $r(159) = -.411$ ,  $p=.000$ , and weakly correlated with higher scores on the GAD-7,  $r(156) = -.194$ ,  $p=.013$ .

### **Hypothesis 2**

#### **Independent T-Tests of Baseline ETS and Participant Demographics**

Independent t-tests were conducted to explore the association between a person's place of birth and their pre-therapy ETS score, and separately, between a persons' ethnicity and their pre-therapy ETS score. A levene's test for equality of variance found that pre-therapy ETS scores, and pre-therapy ETS for therapist scores, were equal in variance,  $F(1,199) = .012$ ,  $p = .914$  and  $F(1,199) = 1.69$ ,  $p = .195$ . As pre-therapy ETS for others scores were found to be not normally distributed, a Spearman's Rho correlation was conducted.

**Table 7**

*Descriptive statistics and results of independent t-test for ETS total pre therapy and Place of birth*

Variable	Born in England	Born outside of England	T-tests
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	<b>M</b>	<b>SD</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>N</b>	<b>t</b>	<b>p</b>
ETS total	102.70	18.57	131	106.65	19.00	70	-1.41	.159
ETS Therapist subscale	55.31	11.09	131	58.39	9.69	70	1.96	.052
ETS Others subscale	47.40	10.45	131	48.26	11.22	70	-.54	.589

**Table 8**

*Descriptive statistics and results of independent t-test for pre-therapy ETS total and ETS for therapist, and Ethnicity and place of birth*

	<b>Ethnicity; Black African, Black Caribbean, Asian, Middle Eastern, Mixed Race</b>			<b>Ethnicity; White</b>			<b>T-test</b>
	<b>M</b>	<b>SD</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>N</b>	<b>t</b>
	100.27	20.75	22	106.65	18.61	84	-1.40
<b>subscale</b>	55.41	9.40	22	56.54	10.87	84	-.44

**Table 9**

*Descriptive statistics and results of Mann Whitney U test for pre-therapy ETS for others and Ethnicity*

	Ethnicity; Black African, Black Caribbean, Asian, Middle Eastern, Mixed Race			Ethnicity; White			Mann Whitney U	
	M	SD	N	M	SD	N	U	p
Others subscale	44.86	2.82	22	50.12	10.36	84	723.00	.11

**Table 10**

*Descriptive statistics and results of Mann Whitney U test for pre-therapy ETS for others and place of birth*

Variable	Born in England			Born outside of England			Mann Whitney U	
	M	SD	N	M	SD	N	U	p
ETS Others subscale	47.40	10.45	131	48.26	11.22	70	4805.00	.575

No significant differences were found between pre-therapy ETS scores of participants according to ethnicity, nor place of birth.

### Hypothesis 3

#### ***Paired Samples T-Test of Baseline and Post-Therapy ETS***

#### ***Wilcoxon Signed Rank Test of Baseline and Post-Therapy MZQ, and Change in ETS and Change in MZQ***

**ETS.** Using a paired samples t-test, it was found that there was a significant difference found between the level of epistemic trust a participant had post therapy (M = 109.05, SD = 18.85) compared to pre therapy (M = 102.86, SD = 17.43),  $t(58) = -3.44$ ,  $p = .001$ ,  $d = -.452$ . This indicates that the higher the score on the ETS, the higher the level of ET, this difference indicates an improvement in score, this finding had a medium effect size.

When exploring the separate subscales of the Epistemic Trust Scale, it was found that there was a significant difference in the level of epistemic trust for therapists a participant had post therapy (M = 59.69, SD = 11.40) compared to pre therapy (M = 55.86, SD = 10.07),  $t(58) = -3.26$ ,  $p = .002$ ,  $d = -.427$ . This finding had a medium effect size.

Using a Wilcoxon Signed Rank test, there was found to be a significant difference in participants' level of epistemic trust for others post therapy (M = 49.36, SD = 10.27) compared to pre therapy (M = 47.00, SD = 9.38),  $z = -2.60$ ,  $p = .009$ ,  $d = .342$ .

**MZQ.** Comparatively, a Wilcoxon signed rank test of pre/post therapy mentalisation score difference did not find a significant difference between pre therapy MZQ score (M = 39.05, SD = 11.52), and post therapy MZQ score (M = 41.20, SD = 11.73),  $z = -1.40$ ,  $p = .160$ ,  $d = 0.19$ .

It also does not seem that change in ETS total or ETS subscale scores are correlated with change in MQZ score. MZQ pre/post-therapy score difference and ETS total pre/post-therapy score difference,  $z = -1.01$ ,  $p = .313$ ., MZQ pre/post-therapy score difference and ETS therapist pre/post-therapy score difference,  $z = .102$ ,  $p = .455$ , MZQ pre/post-therapy score difference and ETS others pre/post-therapy score difference,  $z = .113$ ,  $p = .407$ .

#### **Hypothesis 4**

##### ***Hierarchical Linear Regression of Baseline ETS and pre/post therapy score difference on symptom measures***

Hierarchical linear regression analysis was used to test if pre therapy epistemic trust score predicted symptom improvement (reduction in symptom score post therapy as compared to pre therapy) on the PHQ-9, and BDI II, and GAD-7,

##### ***Measures To Assess Depression Symptom Severity***

**PHQ-9.**Pre therapy ETS score was not a significant predictor of the pre/post therapy score difference on the PHQ-9  $F(1, 172) = 1.37$ ,  $p = .244$ ,  $R^2 = 0.08$ .

When exploring the predictive strength of ETS score, separated by subscale, it was found that the pre-therapy ETS score for therapists did not significantly predict pre/post therapy score difference on the PHQ-9  $F(1,172) = .015$ ,  $p = .902$ ,  $R^2 = .000$ .



Conversely the pre ETS therapy score for others did significantly predict pre/post therapy score difference on the PHQ-9,  $F(1,172) = 4.68$ ,  $p = .033$ ,  $R^2 = .028$ . The regression coefficient ( $B = 1.00$ ,  $p = .032$ ). indicates that an increase of 1 point on the ETS Others subscale, on average, corresponded to an increase in the pre/post score difference on the PHQ-9 of 1 point also.

**BDI II.**Pre-therapy ETS score was a significant predictor of the change in score on the BDI II  $F(1, 49) = 4.77$ ,  $p = .034$ ,  $R^2 = .089$ . The regression coefficient ( $B = -.207$ ,  $p = .034$ ) indicated that an increase of 1 point on the ETS, on average, indicated an increase in the pre/post score difference on the BDI II of over 2 points (a change of 3% of the BDI total score).

When exploring the predictive strength of ETS score, separated by subscale, it was found that the pre-therapy ETS therapists subscale did significantly predict pre/post therapy score difference on the BDI II,  $F(1,49) = 5.37$ ,  $p = .025$ ,  $R^2 = .099$ . The regression coefficient ( $B = -.370$ ,  $p = .035$ ), indicated that an increase of 1 point on the ETS, on average, indicated an increase in the pre/post score difference on the BDI II of 3.7 points.

The pre ETS therapy score for others did not significantly predict pre/post therapy score difference on the BDI II  $F(1,49) = 2.24$ ,  $p = .141$ ,  $R^2 = .044$ .

### ***Measure to assess anxiety symptom severity***

**GAD-7.** Pre-therapy ETS score was a significant predictor of the change in score on the GAD-7  $F(1, 155) = 59.94, p = .000, R^2 = .257$ . The regression coefficient ( $B = -.065, p = .003$ ) indicated that an increase of 1 point on the ETS, corresponded to an increase in the pre/post score difference on the GAD-7 of 0.65.

The pre therapy ETS score for therapists did significantly predict pre/post therapy score difference on the GAD-7,  $F(1,155) = 4.17, p = .047, R^2 = .080$ . The regression coefficient ( $B = -.165, p = .047$ ) indicated that an increase of 1 point on the ETS therapist subscale, on average, corresponded to an increase in the pre/post score difference on the GAD-7 of 1.65.

The pre ETS therapy score for others did not significantly predict pre/post therapy score difference on the GAD-7  $F(1,155) = 0.55, p = .814, R^2 = .000$ .

### **Controlling For Pre-Therapy Symptom Severity**

As baseline ETS score was found to be significantly correlated with baseline symptom score on the PHQ-9 and BDI II, where those with lower scores on the ETS had higher scores on both the PHQ-9 and BDI II, the linear regression analyses above were repeated, whilst controlling for baseline symptom severity. We only conducted these further analyses where the linear regression for pre ETS (total or subscale) and pre/post therapy score difference was found to be significant.

### **PHQ9**

The overall regression of pre therapy symptom severity on the PHQ-9 and pre/post therapy symptom score difference on the PHQ-9 was significant  $R^2 = .185$ ,  $F(1, 163) = 36.91$ ,  $p = .000$ , Adjusted  $R^2 = .180$ . The overall regression of pre therapy symptom severity on the PHQ-9 and pre therapy epistemic trust score on the ETS and pre/post therapy symptom score difference on the PHQ-9 was significant  $R^2 = .191$ ,  $F(1, 162) = 19.10$ ,  $p = .000$ , Adjusted  $R^2 = .181$ .

The  $R^2$  value indicates that pre-therapy PHQ9 score explains 18.5% of the variance in the pre/post PHQ-9 difference but pre ETS and pre PHQ9 accounts for 19.1% in the variance of pre/post therapy score on PHQ-9. Pre therapy ETS score only contributes an increase of 0.6% to the variance but this is a significant addition.

### **GAD7**

The overall regression of pre therapy symptom severity on the GAD-7 and pre/post therapy symptom score difference on the GAD-7 was significant  $R^2 = .262$ ,  $F(1, 155) =$  ,  $p = .000$ ., Adjusted  $R^2 = .257$ . The overall regression of pre therapy symptom severity on the GAD-7 and pre therapy epistemic trust score on the ETS and pre/post therapy symptom score difference on the GAD-7 was also significant  $R^2 = .304$ ,  $F(1, 154) =$  ,  $p = .000$  , Adjusted  $R^2 = .295$ .

The  $R^2$  value indicates that pre-therapy GAD-7 score explains 26.2% of the variance in the pre/post therapy GAD-7 score difference but pre ETS and pre PHQ9 accounts for 30.4% in the variance of pre/post therapy score on GAD-7, an increase of 4.2%.

## **BDI II**

The overall regression of pre therapy symptom severity on the BDI II and pre/post therapy symptom score difference on the BDI II was not significant  $R^2 = .067$ ,  $F(1, 49) =$  ,  $p = .067$ , Adjusted  $R^2 = .048$ . The overall regression of pre therapy symptom severity on the BDI II and pre therapy epistemic trust score on the ETS and pre/post therapy symptom score difference on the BDI II was significant  $R^2 = .535$ .,  $F(1. 48) =$  ,  $p = .000$ , Adjusted  $R^2 = .256$ .

The  $R^2$  value indicates that pre-therapy BDI II score explains 6.7% of the variance in the pre/post therapy BDI II score difference but pre ETS and pre BDI II accounts for 28.6% in the variance of pre/post therapy score on BDI II, an increase of 21.9%.

## **ETS Therapist and ETS Others Subscales**

### ***ETS Therapist***

When controlling for pre-therapy symptom score on the GAD-7, it was found that there was a 5.8% increase in the explanatory power of the model using pre-therapy Therapist ETS score,  $R^2 = .320$ ,  $F(1, 154) = 36.17$ ,  $p = .000$ , Adjusted  $R^2 = .311$ ., compared to the model using pre therapy symptom score on the GAD-7 alone  $R^2 = .262$ ,  $F(1, 155) = 59.94$ ,  $p = .000$ , Adjusted  $R^2 = .257$ .

When controlling for pre therapy symptom score on the BDI II , it was found that there was a 20.4% increase in the explanatory power of the model using pre-therapy Therapist ETS score,  $R^2 = .271$ ,  $F(1, 48) = 8.91$ ,  $p = .001$ , Adjusted  $R^2 = .240$ , compared to the model using pre therapy symptom score on the BDI II alone  $R^2 = .067$ ,  $F(1, 49) = 3.51$ ,  $p = .067$ , Adjusted  $R^2 = .048$

When controlling for pre therapy symptom score on the PHQ-9, it was found that there was a 2.1% increase in the explanatory power of the model using pre-therapy Therapist ETS score,  $R^2 = .206$ ,  $F(1, 162) = 20.95$ ,  $p = .000$ , Adjusted  $R^2 = .196$ , compared to the model using pre therapy symptom score on the PHQ-9 alone  $R^2 = .185$ ,  $F(1, 163) = 36.91$ ,  $p = .000$ , Adjusted  $R^2 = .180$

### ***ETS Others***

When controlling for pre therapy symptom score on the PHQ-9, it was found that there was no improvement in the explanatory power of the model using pre-therapy Others ETS score and pre therapy PHQ-9 score,,  $R^2 = .185$ ,  $F(1, 162) = 18.37$ ,  $p = .000$ , Adjusted  $R^2 = .175$ , compared to the model using pre therapy symptom score on the PHQ-9 alone  $R^2 = .185$ ,  $F(1, 163) = 36.91$ ,  $p = .000$ , Adjusted  $R^2 = .180$ . Both models were found to significantly explain 18.5% of the variance seen in pre/post therapy PHQ-9 score difference. This suggests that the significant effect seen between pre-therapy ETS for others score, and pre/post therapy score difference on the PHQ-9, is not a true effect, and that pre-therapy symptom severity on the PHQ-9 is a confounder of this relationship

(especially given that pre-therapy symptom severity and pre-therapy ETS score were found to be correlated).

When controlling for pre-therapy symptom score on the GAD-7, it was found that there was a 1.2% increase in the power of the model using pre-therapy Others ETS score,  $R^2 = .274$ ,  $F(1, 154) = 29.06$ ,  $p = .000$ , Adjusted  $R^2 = .265$ ., compared to the model using pre therapy symptom score on the GAD-7 alone  $R^2 = .262$ ,  $F(1, 154) = 59.94$ ,  $p = .000$ , Adjusted  $R^2 = .257$ .

When controlling for pre therapy symptom score on the BDI II , it was found that there was a 12.3% increase in the explanatory power of the model using pre-therapy Therapist ETS score,  $R^2 = .190$ ,  $F(1, 48) = 5.64$ ,  $p = .006$ , Adjusted  $R^2 = .156$ , compared to the model using pre therapy symptom score on the BDI II alone  $R^2 = .067$ ,  $F(1, 49) = 3.51$ ,  $p = .067$ , Adjusted  $R^2 = .048$

## **Discussion**

### **Summary Of Findings**

The study sample seemed to reflect the IAPT population in terms of age and gender, but not in terms of ethnicity. Those identifying as white were overrepresented compared to the general IAPT population.

Hypothesis 1 was partly confirmed. Pre-therapy, a lower ETS total score, and a lower ETS therapist subscale score, were moderately correlated with a higher score on the BDI

II and PHQ-9. Pre-therapy, a lower ETS Others subscale score was moderately correlated with a higher score on the BDI II and PHQ-9, and weakly with the GAD-7.

Hypothesis 2 was rejected. Those who had a place of birth outside England, and those who were of a black african, black caribbean, asian, middle eastern, or mixed race ethnicity did not score significantly lower on total ETS score, ETS for others subscale, nor the ETS for therapists subscale.

Hypothesis 3 was partly confirmed, Epistemic trust level was found to improve after therapy within IAPT services, confirming hypothesis 3.

In contrast to what was hypothesised, on average, mentalisation scores did not significantly improve after therapy - despite total ETS scores increasing significantly. Nor was there a significant correlation between change in ETS score and change in MZQ score before and after therapy. This suggests that mentalisation did not act as a mediator of the change seen in ETS.

Patients with lower levels of epistemic trust had significantly less symptom improvement on the BDI II and GAD-7, as suggested in hypothesis 4. This effect was not found for the PHQ-9.

ETS therapist subscale score was found to be a significant predictor of pre/post therapy score difference on the BDI II and GAD-7. Specifically, as ETS therapist subscale score

increased, the pre/post therapy score difference decreased. This effect was not found for the PHQ-9.

These effects remained after controlling for pre-therapy symptom severity. Indeed, it was found that pre-therapy total ETS score contributed for an extra 21.9% of variance seen in post BDI score, than the variance explained by pre-therapy therapy BDI II score alone.

The ETS Others subscale score was found to be a significant predictor of pre/post therapy score difference on the PHQ-9. Specifically, as ETS Others subscale score increased, the pre/post therapy score difference decreased. This effect was not found for the BDI II and GAD-7. The significant finding on the PHQ-9 did not remain after controlling for pre-therapy symptom severity.

Overall it seems that the concept of epistemic trust is hugely relevant to psychotherapy effectiveness in that a lower level of ET seems to be related to greater symptom severity, , and to improve after short term therapy. Finally, the level of epistemic trust someone has affects how much their symptoms improve after therapy (at least on two of the outcome measures we examined).

### **Implication Of Findings**

It may be that having a lower level of epistemic trust leads to more severe mental health symptoms, indeed this would fit with the theory that those with lower epistemic trust may have less ability to cope with life's ever changing circumstances (Germaine et al, 2015).



It is interesting that having a marginalised identity was not associated with a lower level of ETS pre-therapy. We of course can only comment on the two marginalised identities examined here, it may be that others such as sexuality and disability may have a relationship, this data was not collected so it was not possible to examine these potential relationships.

These findings do not fit with research that finds that levels of mistrust/paranoia generally is higher amongst those who are not born in England, and those who are not white, particularly when living in areas that were mostly white, and mostly made up of those born in England (Briathwite et al, 2021).

It may be that there was an interactive effect between place of birth and ethnicity that we did not examine. Further, if we had more specifically examined ethnicity rather than grouping those who were white and non-white, we could have considered the reasons why certain ethnic groups differed.

Finally, it may be that due to the disproportionate number of participants that identified as non-white, effects of ethnicity were not appropriately powered to be fully examined.

It does seem that ETS level improves within short term therapy and this may be due to the focus within IAPT services on short focused pieces of work that necessitate focus on goals; this fits with previous research findings that an assessment of difficulties, co-

creating goals -and concrete therapy tasks that target these goals - improve epistemic trust (Kamphuis and Finn, 2018).

Contextualising this finding within the 3 communication systems theory, it suggests that therapy within IAPT services enables the restoration of epistemic trust through the process of communicating content (system 1), the re-emergence of robust mentalising (system 2), which in turn enables the consideration of alternative perspectives and applying this learning to their lives (system 3).

Despite the three communication systems theory focusing on the re-emergence of mentalisation being a key process in the restoration of epistemic trust and thus psychotherapeutic effectiveness, we did not find a significant increase in mentalisation ability, nor any correlation with epistemic trust, despite ETS ability improving. This may suggest that the relationship between mentalisation and epistemic trust is not as theorised. However, it may be that mentalising ability was not appropriately measured by the MZQ, or that changes in mentalisation were not reflected on the MZQ until some time post therapy. It was not possible to test this hypothesis due to not collecting follow up data.

It is also worth noting that these findings may not generalise to the IAPT population as a whole, due to the participants in this study having on average 14.14 sessions, which is 8 more than the average nationally. It is not possible to say whether similar improvements in epistemic trust would be seen after 6 sessions.

It is interesting that pre therapy ETS predicted pre/post therapy score difference on the BDI II and the GAD-7 but not the PHQ-9. It is possible that this is because the BDI II is longer form measure, measuring more depressive features, compared to the PHQ-9 - and therefore able to measure a change in features of depression that the latter cannot. This being said, the GAD-7 is also a short form measure and yet a significant effect was found. This might mean that the effects of ETS on anxiety are more pronounced. Future work could include more extensive and nuanced measures of anxiety to explore this further.

### **Strengths**

This study was only the second to examine the concept of epistemic trust within the IAPT population. Exploring such a concept could be an important step in furthering the progress in maximising the effectiveness of psychotherapy.

The sample size in this study was reasonable, hopefully reducing the chance of type II errors. Further, the addition of prepost therapy data allowed analysis of change which had not previously been possible with the existing data set.

Outcome measures outside of those routinely collected in IAPT like the BDI II were included, this is a particular strength when the PHQ-9 and the GAD-7 have been criticised for their low specificity and high rates of false positives (Pranckeviciene et al, 2022).

## **Weaknesses**

One of the main weaknesses of this study was the use of the ETS which is not currently validated. Although it was important to include a measure that was specifically measuring ETS, the use of an unvalidated measure means that it is hard to make any hard conclusions when we cannot be sure that we are in fact measuring what we think are measuring. Further, it is not possible to confidently stipulate what is and is not a high or low score, and how significant any changes are (for example, using reliable clinical change).

Unfortunately it was not possible to examine those who did not even attend the first session of therapy, nor those with incomplete data. Without the completion of appropriate outcome measures, it was not possible to explore whether those who do not begin therapy have a lower level of ETS. Nor was an intent to treat analysis conducted, which may have highlighted how those with more sporadic attendance had lower ETS. Further, it may be that those who drop out after referral, and who don't even attend an assessment within IAPT services (necessary for entry into this study) may have lower ET than the participants included, this sample therefore may not be representative of those with CMDs as a whole.

It is also a limiting factor that the analysis of demographic factors and pre-therapy ETS was likely underpowered due to the low numbers of non-white people and people not born in England.

It is limiting that a gold standard measure of anxiety was not included in the study as it may be that impacts on anxiety according to ETS were not fully examined by the GAD-7

Finally, it may be that only using symptom measures to examine the effectiveness of therapy does not fully examine therapeutic effectiveness, it may be that if we included a life satisfaction measure that differences would have been seen on such a measure, rather than any concrete differences in symptoms.

### **Clinical Relevance**

Cynicism regarding the effectiveness of short term therapy may be challenged by these findings given that epistemic trust did improve after therapy within IAPT settings (although the average number of sessions was much higher than the average nationwide). Caution should be taken before recommending that short term therapy universally effective, certainly given the findings that those with lower epistemic trust had lesser symptom improvement. Although, it is not clear that this would have changed if said people had received more sessions.

It could be said that as it was found that ET improves after therapy within IAPT, and that having a higher level of ET is related to better therapy outcome, that for those with lower epistemic trust it may be necessary to have multiple courses of therapy in order that epistemic trust can first increase to such a level that a person can effectively engage in therapy. This also fits with previous research that lower levels of epistemic trust are associated with a slower rate of depressive symptoms (Wickham et al, 2019).

The primary takeaway from this study is that measuring ET could be a useful assessment tool in planning therapy and determining whether adjustments could be made for those with lower epistemic trust. The research is not currently there to suggest what these adjustments should be, but this study suggests that more of a focus on building epistemic trust explicitly could be helpful. It seems that epistemic trust is important in therapy success, but also that therapy can effectively work to improve it.

The association of lower baseline epistemic trust with more severe mental health problems also supports the importance of prevention of the development of epistemic vigilance. This has implications for child and developmental psychological services, where work to support children and their family systems may need to focus on developing or guarding epistemic trust specifically.

### **Future Avenues For Research**

It may be useful to examine trends and changes session by session rather than just pre/post therapy. It may be that intricate changes throughout therapy highlight the development of ETS throughout therapy, as well as how mentalising capacity is related to this.

Validating the ETS measure used in this study, and essentially establishing cut offs, could be incredibly useful in increasing the probability that this measure is covering the constructs proposed and thus any recommendations for clinical practice.

It would be interesting to see whether larger effects were seen if this study were instead to be conducted with a sample of people with more severe mental health difficulties, as such a replication within a different mental health setting could shed more light on the relationship between epistemic trust and therapeutic effectiveness.

A longitudinal study exploring the influence of epistemic trust from birth to adulthood could help to explore the influence of this phenomenon through development and further our understanding of its influence. Further, an RCT examining the effectiveness of therapy that has a specific focus on the improvement of epistemic trust compared to therapy without this focus could be highly influential in our understanding of how to maximise psychotherapeutic effectiveness. Similarly, it would be interesting to explore whether those who have improved ET after their first course of therapy, then see similar improvements in symptoms after more sessions, similar to those who initially started therapy with a higher ETS score.

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## Appendix 1

### Epistemic Trust Scale (ETS)

1. Psychotherapists are more trustworthy than most other people.
2. I would be very likely to take the advice of a psychotherapist.
3. I think that my psychotherapist would always be honest with me.
4. A lot of psychotherapists cannot be trusted. **R**
5. Most psychotherapists want what is best for their clients.
6. Psychotherapists often 'get it wrong'. **R**
7. I don't expect my psychotherapist to really care about me. **R**
8. It will take a long time for me to trust my psychotherapist fully. **R**
9. If I am totally open with my psychotherapist I may get hurt. **R**
10. I don't expect my psychotherapist to tell me what he or she really thinks about me. **R**
11. I don't think I could ever fully trust my psychotherapist. **R**
12. I believe that most psychotherapists are sincere.
13. I tend not to follow other people's advice about how to live my life. **R**
14. I don't like people noticing things about me that I am not aware of myself. **R**
15. I love learning from new people.
16. Most people misunderstand me ('get me all wrong'). **R**
17. I always give people the benefit of the doubt.
18. I usually ask people for advice when I have a personal problem.
19. I don't doubt people's motives when they criticise me.
20. If you put a lot of faith in people you will get hurt. **R**
21. I will not trust someone until they have proven themselves trustworthy. **R**
22. I always doubt people's motives when they complement me. **R**
23. I find it hard to trust people with whom I have little in common. **R**
24. Most people are genuine.

\*\*\* R indicates reverse scoring

#### **Epistemic Trust Scoring**

Strongly Agree – 7

Agree – 6

Somewhat Agree – 5

Neither Agree or Disagree – 4

Somewhat Disagree – 3

Disagree – 2  
Strongly Disagree – 1

## Appendix 2

### *Results of Kolmogorov-Smirnov normality tests*

Variable	Kolmogorov-Smirnov results			
	Maximal absolute difference (D)	N	p	Normally distributed
Pre-therapy PHQ9	0.120	158	.055	✓
Pre/post therapy difference PHQ-9	0.115	158	.079	✓
Pre-therapy GAD-7	0.109	158	.195	✓
Pre/post therapy difference GAD-7	0.119	158	.072	✓
Pre-therapy BDI II	0.073	161	.200	✓
Pre/post therapy difference BDI II	0.158	51	.003	✗

Variable	Kolmogorov-Smirnov results			
	Maximal absolute difference (D)	N	p	Normally distributed
Pre-therapy ETS total	0.009	158	.200	✓
Post-therapy ETS total	0.068	51	.200	✓
Pre/Post therapy ETS total difference	0.075	51	.200	✓
Pre-therapy ETS Therapist total	0.082	158	.200	✓
Post-therapy ETS Therapist total	0.082,	51	.200	✓
Pre/Post therapy ETS Therapist total difference	0.072	51	.200	✓
Pre-therapy ETS Others total	0.122	158	.048	×
Post-therapy ETS Others total	0.130	51	.025	×
Pre/Post therapy ETS Others total difference	0.079	51	.200	✓

Variable	Kolmogorov-Smirnov results			
	Maximal absolute difference (D)	N	p	Normally distributed
Pre-therapy MZQ total	0.072	164	.200	✓
Post-therapy MZQ total	0.128	56	.023	×
Pre/Post therapy MZQ total difference	0.124	56	.032	×



### Appendix 3

Correlation Matrix for ETS pre, post, and pre/post therapy difference and IAPT outcome measures (PHQ-9 and GAD-7) pre, post, and pre/post therapy difference. Pearson correlations were conducted apart from for the variables of pre-therapy and post therapy ETS for others.

Variable		ETS TOTAL PRE		ETS TOTAL POST		ETS THER APIST		ETS THER APIST		ETS man's Rho		ETS man's Rho		ETS RS PHQ-9		ETS RS PHQ-9		
		L PRE	POST	L PRE	POST	L PRE	POST	L PRE	POST	conducted	conducted	DIFFE RENC	DIFFE RENC	differe nce	PRE	POST	PRE	POST
ETS TOTAL PRE	Pearson Correlation	1	.793**	-0.139	.903**	.594**	-.274*	.857**	.773**	0.091	-0.033	-0.244	-.485**	-.513**	-0.066	-.315*		
	Sig. (2-tailed)		0.000	0.321	0.000	0.000	0.047	0.000	0.000	0.515	0.813	0.087	0.000	0.000	0.650	0.026		
	N	53	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50	
ETS TOTAL POST	Pearson Correlation	.793**	1	.494**	.778**	.885**	.293*	.602**	.873**	.553**	-0.151	-.369**	-.456**	-.613**	-0.053	-.437**		
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.279	0.008	0.001	0.000	0.712	0.002		
	N	53	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50	

ETS TOTAL DIFFEREN CE	Pearson	-0.139	.494**	1	-0.024	.591**	.868**	-0.205	.300*	.768**	-0.198	-0.241	-0.049	-0.264	0.007	-0.249
	Sig. (2- tailed)	0.321	0.000		0.863	0.000	0.000	0.150	0.032	0.000	0.154	0.092	0.728	0.056	0.962	0.081
	N	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50

Variable		ETS OTHE OTHE RS RS TOTAL L LPRE POST *Spear *Spear															
		ETS TOTAL L PRE	ETS TOTAL L POST	ETS DIFFE RENC E	ETS THER APIST TOTAL L PRE	ETS THER APIST TOTAL L POST	ETS THER APIST DIFFE RENC E	ETS man's Rho correla tion condu cted	ETS man's Rho correla tion condu cted	ETS OTHE RS DIFFE RENC E	ETS PHQ-9 DIFFE RENC E	ETS GAD-7 differe nce	ETS PHQ-9 PRE	ETS PHQ-9 POST	ETS GAD-7 PRE	ETS GAD-7 POST	

ETS THERAPIS T TOTAL PRE	Pearson	.903**	.778**	-0.024	1	.724**	-0.210	.556**	.644**	0.224	-0.068	-.283*	-.423**	-.495**	0.008	-.292*
	Sig. (2- tailed)	0.000	0.000	0.863		0.000	0.132	0.000	0.000	0.106	0.626	0.047	0.002	0.000	0.956	0.040
	N	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50

ETS THERAPIS T TOTAL POST	Pearson	.594**	.885**	.591**	.724**	1	.522**	0.266	.493**	.441**	-0.206	-.372**	-.276*	-.506**	-0.003	-.396**
	Sig. (2- tailed)	0.000	0.000	0.000	0.000		0.000	0.059	0.000	0.001	0.139	0.008	0.046	0.000	0.982	0.004
	N	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50

ETS THERAPIS	Pearson	-.274*	.293*	.868**	-0.210	.522**	1	-0.251	0.003	.349*	-0.207	-0.171	0.133	-0.106	-0.014	-0.193
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T DIFFERENCE	Sig. (2-tailed)	0.047	0.033	0.000	0.132	0.000		0.075	0.981	0.011	0.136	0.236	0.343	0.452	0.923	0.180
	N	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50
ETS OTHERS TOTALPRE	Pearson Correlation	.877**	.626**	-0.235	.585**	.310*	-.283*	1.000	.734**	-0.078	0.014	-0.141	-.442**	-.414**	-0.132	-0.264
	Sig. (2-tailed)	0.000	0.000	0.090	0.000	0.024	0.040		0.000	0.578	0.923	0.327	0.001	0.002	0.360	0.064
	N	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50

Variable		ETS OTHERS TOTALPRE POST														
		ETS TOTALPRE	ETS TOTALPOST	ETS DIFFERENTIALPRE	ETS DIFFERENTIALPOST	ETS THERAPY TOTALPRE	ETS THERAPY TOTALPOST	ETS THERAPY DIFFERENTIALPRE	ETS THERAPY DIFFERENTIALPOST	ETS man's Rho conducted	ETS man's Rho conducted	ETS OTHERS DIFFERENTIALPRE	ETS OTHERS DIFFERENTIALPOST	ETS OTHERS PHQ-9 PRE	ETS OTHERS PHQ-9 POST	ETS OTHERS GAD-7 PRE
ETS OTHERS TOTALPOST	Pearson Correlation	.801**	.862**	0.258	.631**	.527**	-0.033	.734**	1.000	.529**	-0.052	-0.268	-.533**	-.568**	-0.095	-.365**
	Sig. (2-tailed)	0.000	0.000	0.062	0.000	0.000	0.814	0.000		0.000	0.710	0.060	0.000	0.000	0.513	0.009
	N	53	53	53	53	53	53	51	51	53	53	50	53	53	50	50
ETS OTHERS	Pearson Correlation	0.091	.553**	.768**	0.224	.441**	.349*	-0.043	.595**	1	-0.107	-0.238	-0.263	-.363**	0.031	-0.224



	Sig. (2-tailed)	0.000	0.001	0.728	0.002	0.046	0.343	0.256	0.013	0.057	0.005	0.896	0.000	0.000	0.004	
	N	53	53	53	53	53	53	51	51	53	53	50	53	53	50	
PHQ-9 POST	Pearson Correlation	-.513**	-.613**	-.264	-.495**	-.506**	-.106	-.414**	-.568**	-.363**	.502**	.663**	.587**	1	0.189	.864**
	Sig. (2-tailed)	0.000	0.000	0.056	0.000	0.000	0.452	0.002	0.000	0.008	0.000	0.000	0.000	0.189	0.000	
	N	53	53	53	53	53	53	53	53	53	53	50	53	53	50	50
GAD-7 PRE	Pearson Correlation	-0.066	-0.053	0.007	0.008	-0.003	-0.014	-0.132	-0.095	0.031	-.313*	-.474**	.483**	0.189	1	.366**
	Sig. (2-tailed)	0.650	0.712	0.962	0.956	0.982	0.923	0.360	0.513	0.829	0.027	0.001	0.000	0.189	0.009	
	N	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
GAD-7 POST	Pearson Correlation	-.315*	-.437**	-.249	-.292*	-.396**	-.193	-0.264	-.365**	-.224	.507**	.647**	.398**	.864**	.366**	1
	Sig. (2-tailed)	0.026	0.002	0.081	0.040	0.004	0.180	0.064	0.009	0.118	0.000	0.000	0.004	0.000	0.009	
	N	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

*Correlation Matrix for ETS pre, post, and pre/post therapy difference and BDI II pre, post, and pre/post therapy difference. Pearson correlations were conducted apart from for the variables of pre-therapy and post therapy ETS for others, and pre/post therapy difference on the BDI II.*

		ETStotal pre	ETStotal Post	ETStotal DIFFER ENCE	ETS THERA PIST TOTAL PRE	ETS THERA PIST TOTAL POST	ETS THERA PIST DIFFER ENCE	ETS OTHER S TOTAL PRE *Spear man Rho's correlati on conduct ed	ETS OTHER S TOTAL POST *Spear man Rho's correlati on conduct ed	ETS OTHER S DIFFER ENCE	BDI TOTAL PRE	BDI TOTAL POST	BDI DIFFER ENCE *Spear man Rho's correlati on conduct ed
ETStotal pre	Pearson Correlati on	1	.784**	-0.146	.898**	.581**	-0.268	.875**	.792**	0.070	-.458**	-.625**	-0.273
	Sig. (2- tailed)		0.000	0.307	0.000	0.000	0.058	0.000	0.000	0.626	0.001	0.000	0.053
	N	51	51	51	51	51	51	51	51	51	51	51	51
ETStotal Post	Pearson Correlati on	.784**	1	.500**	.768**	.883**	.313*	.615**	.856**	.545**	-.356*	-.668**	-.483**
	Sig. (2- tailed)	0.000		0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.010	0.000	0.000
	N	51	51	51	51	51	51	51	51	51	51	51	51
ETStotal DIFFER ENCE	Pearson Correlati on	-0.146	.500**	1	-0.029	.595**	.871**	-0.240	0.259	.771**	0.071	-0.192	-.318*
	Sig. (2- tailed)	0.307	0.000		0.838	0.000	0.000	0.090	0.066	0.000	0.620	0.176	0.023
	N	51	51	51	51	51	51	51	51	51	51	51	51

		ETS OTHER S TOTAL PRE *Spear man	ETS OTHER S TOTAL POST *Spear man	ETS OTHER S TOTAL DIFFER ENCE	ETS THERA PIST TOTAL PRE	ETS THERA PIST TOTAL POST	ETS THERA PIST DIFFER ENCE	Rho's correlati on conduct ed	Rho's correlati on conduct ed	ETS OTHER S DIFFER ENCE	BDI TOTAL PRE	BDI TOTAL POST	BDI DIFFER ENCE *Spear man Rho's correlati on conduct ed
ETS THERA PIST TOTAL PRE	Pearson Correlati on	.898**	.768**	-0.029	1	.717**	-0.201	.572**	.614**	0.205	-.391**	-.581**	-.316*
	Sig. (2- tailed)	0.000	0.000	0.838		0.000	0.157	0.000	0.000	0.149	0.005	0.000	0.024
	N	51	51	51	51	51	51	51	51	51	51	51	51
ETS THERA PIST TOTAL POST	Pearson Correlati on	.581**	.883**	.595**	.717**	1	.539**	.294*	.513**	.432**	-0.177	-.541**	-.453**
	Sig. (2- tailed)	0.000	0.000	0.000	0.000		0.000	0.036	0.000	0.002	0.215	0.000	0.001
	N	51	51	51	51	51	51	51	51	51	51	51	51
ETS THERA PIST DIFFER ENCE	Pearson Correlati on	-0.268	.313*	.871**	-0.201	.539**	1	-.278*	-0.021	.360**	0.224	-0.058	-0.247
	Sig. (2- tailed)	0.058	0.025	0.000	0.157	0.000		0.049	0.882	0.010	0.114	0.687	0.081

	N	51	51	51	51	51	51	51	51	51	51	51	51
ETS OTHERS TOTAL PRE	Pearson Correlation	.875**	.615**	-0.240	.572**	.294*	-.278*	1	.800**	-0.095	-.422**	-.524**	-0.162
	Sig. (2-tailed)	0.000	0.000	0.090	0.000	0.036	0.049		0.000	0.505	0.002	0.000	0.256
	N	51	51	51	51	51	51	51	51	51	51	51	51
									ETS OTHERS TOTAL PRE *Spearman Rho's correlation conducted	ETS OTHERS TOTAL POST *Spearman Rho's correlation conducted			BDI DIFFERENCE *Spearman Rho's correlation conducted
		ETStotal pre	ETStotal Post	ETStotal DIFFERENCE	ETS THERA TOTAL PRE	ETS THERA TOTAL POST	ETS THERA DIFFERENCE			ETS OTHERS DIFFERENCE	BDI TOTAL PRE	BDI TOTAL POST	
ETS OTHERS TOTAL POST	Pearson Correlation	.792**	.856**	0.259	.614**	.513**	-0.021	.800**	1	.521**	-.456**	-.625**	-.347*
	Sig. (2-tailed)	0.000	0.000	0.066	0.000	0.000	0.882	0.000		0.000	0.001	0.000	0.013
	N	51	51	51	51	51	51	51	51	51	51	51	51
ETS OTHERS DIFFERENCE	Pearson Correlation	0.070	.545**	.771**	0.205	.432**	.360**	-0.095	.521**	1	-0.156	-.291*	-0.260
	Sig. (2-tailed)	0.626	0.000	0.000	0.149	0.002	0.010	0.505	0.000		0.275	0.038	0.065



	N	51	51	51	51	51	51	51	51	51	51	51	51
BDI TOTAL PRE	Pearson Correlation	-.458**	-.356*	0.071	-.391**	-0.177	0.224	-.422**	-.456**	-0.156	1	.648**	-0.209
	Sig. (2-tailed)	0.001	0.010	0.620	0.005	0.215	0.114	0.002	0.001	0.275		0.000	0.141
	N	51	51	51	51	51	51	51	51	51	51	51	51
BDI TOTAL POST	Pearson Correlation	-.625**	-.668**	-0.192	-.581**	-.541**	-0.058	-.524**	-.625**	-.291*	.648**	1	.539**
	Sig. (2-tailed)	0.000	0.000	0.176	0.000	0.000	0.687	0.000	0.000	0.038	0.000		0.000
	N	51	51	51	51	51	51	51	51	51	51	51	51
								ETS OTHERS TOTAL PRE *Spearman Rho's correlation conducted	ETS OTHERS TOTAL POST *Spearman Rho's correlation conducted	ETS OTHERS DIFFERENCE	BDI TOTAL PRE	BDI TOTAL POST	BDI DIFFERENCE *Spearman Rho's correlation conducted
BDI DIFFERENCE	Pearson Correlation	-.298*	-.462**	-.321*	-.314*	-.495**	-.316*	-0.209	-.301*	-0.201	-0.259	.568**	1.000
	Sig. (2-tailed)	0.034	0.001	0.022	0.025	0.000	0.024	0.141	0.032	0.157	0.067	0.000	

N 51 51 51 51 51 51 51 51 51 51 51 51

*Correlation Matrix for ETS pre, post, and pre/post therapy difference and MZQ pre, post, and pre/post therapy difference.*

*Spearman's Rho correlation conducted for all variables other than pre-therapy MZQ where a Pearson correlation was conducted.*

		PreMZQ *Pearson Correlation conducted	PostMZQ	PrePostMZQ difference	ETStotalpre	ETStotalPost	ETStotalDIFFEREN CE	
Spearman's rho	PreMZQ	Correlation Coefficient	1.000	.722**	-.340*	0.120	-0.039	-0.060
		Sig. (2-tailed)		0.000	0.010	0.400	0.784	0.677
		N	56	56	56	51	51	51
	PostMZQ	Correlation Coefficient	.722**	1.000	.352**	-0.016	-0.111	-0.020
		Sig. (2-tailed)	0.000		0.008	0.910	0.437	0.887
		N	56	56	56	51	51	51
	PrePostMZQdi fference	Correlation Coefficient	-.340*	.352**	1.000	-0.035	0.005	0.008
		Sig. (2-tailed)	0.010	0.008		0.808	0.972	0.953
		N	56	56	56	51	51	51

ETStotalpre	Correlation Coefficient	0.120	-0.016	-0.035	1.000	.777**	-0.103
	Sig. (2-tailed)	0.400	0.910	0.808		0.000	0.473
	N	51	51	51	51	51	51
ETStotalPost	Correlation Coefficient	-0.039	-0.111	0.005	.777**	1.000	.499**
	Sig. (2-tailed)	0.784	0.437	0.972	0.000		0.000
	N	51	51	51	51	51	51
ETStotalDIFFERENCE	Correlation Coefficient	-0.060	-0.020	0.008	-0.103	.499**	1.000
	Sig. (2-tailed)	0.677	0.887	0.953	0.473	0.000	
	N	51	51	51	51	51	51



## **Part 3: Critical Appraisal**

## **Critical appraisal**

### **Introduction**

In this critical analysis I will look back over the whole process of this doctoral thesis and reflect on what drew me to the project, what I hoped to gain, the difficulties that I experienced whilst conducting the research and writing up the thesis. I will discuss what I have learnt, what I would change, and give a general conclusion.

### **What drew me to this project**

Whilst working in various roles pre-training, I found using attachment theory, and wider relational psychodynamic theory, particularly helpful in understanding what is going on for others, and myself. My most extensive experience was working at a secure step-down service for women with a diagnosis of personality disorder and forensic history. This was only my second job out of my undergraduate degree, and I remember feeling overwhelmed by the complexity of the work; particularly in managing difficult interactions, difficult feelings within myself, and struggling to understand why for some it seemed so difficult to take on help and support, and how often what I might perceive as being helpful and supportive was interpreted as the exact opposite.

Although I had a general understanding of mentalisation pre-training, I distinctly remember a lecture in the first year of the doctorate, specifically on mentalisation. My supervisor on my first placement had also completed further training on Mentalisation Based Therapy and so I was supervised to use some of the theory, skills, and techniques, in my work with adults in a community mental health team. I found this

experience really enriched my work and understanding of service users, especially in terms of the therapeutic relationship.

As such, when reviewing the choices for thesis projects, I was excited to have the potential opportunity to work with Professor Peter Fonagy, a pioneer in the area.

The specific project examining epistemic trust within IAPT services also appealed to me due to my own experiences of using IAPT services as a service user, as well as some strong beliefs I had about their utility, and the limitations of the service model used.

Despite the existing theory that therapy is effective due to restoring mentalising ability and epistemic trust, I had my doubts whether such changes would be seen after short-term therapy within IAPT services and suspected that it would be likely that those with attachment difficulties/lower epistemic trust would need longer-term therapy. I was also conscious that IAPT services generally have strict criteria as to who is eligible for their services, but due to incredibly stretched secondary care services, that increasingly those with more complex difficulties may end up being seen within IAPT which may not be helpful.

### **Modified views**

The results of my thesis really challenged my preconceptions and highlighted the importance of evidenced based practice. It is buoying that epistemic trust improved through therapy, although I do still have my doubts whether the sample in this study is

really representative when IAPT services are commissioned to deliver short-term therapy to those with mild to moderate mental health difficulties. Further, it does seem that the participants received many more sessions than is the average in IAPT services and my particular concern is how effective 6 sessions of low level interventions, such as guided self-help, can be with those with lower epistemic trust. It seems unlikely that there is enough time for a sufficient therapeutic relationship to be developed which may prevent the re-emergence of epistemic trust so necessary for effective treatment.

I was really surprised that mentalisation did not improve, nor was it correlated with epistemic trust scores. Given my interest in MBT, I was disappointed that these variables were not related and it has made me wonder whether the MZQ is a suitable outcome measure or again whether the sample was not the most appropriate to explore this effect when it is likely that the participants in this study scored higher on the MZQ and ETS than might be expected of those in secondary care.

## **COVID-19**

Similarly to most trainees conducting their doctoral research in 2020, this thesis was not impervious to the effects of COVID-19. The research teams within the recruiting NHS trusts were short-staffed and instructed to focus on COVID-19 related research studies. As such recruitment drastically reduced in the spring and summer of 2020. One of the trusts was particularly affected, whereas another was still keen to reach their recruitment targets, and even set a higher target which thankfully meant we were able to mitigate some of the decrease in recruitment.



However, when reaching the stage of data extraction from the research teams, I encountered another problem. Due to increasing workload from other studies, neither trusts were willing to provide the depth of data that we had planned for. This meant that I needed to simplify my research questions, and analysis plan. This required a lot of extra work and I was also very disappointed as I worried that my thesis would not be as useful a contribution to the evidence base on epistemic trust.

As it has turned out, I feel that my thesis is still very useful in helping to elucidate what makes psychotherapy effective.

### **What I would have changed**

If I were to conduct this research again, I would have liked to include some further measures relating to trauma and loss, and asking participants for their sexuality and disability status. I felt that only having ethnicity and place of birth data limited how much could be learnt about the influence of adversity and deprivation, and particularly marginalised identities on epistemic trust levels.

I would also like to split the ethnicity and place of birth data into more specific categories in order that more specific examinations could be made rather than grouping all people of colour and all those not born in England, together. This can create the impression that those who are white, and being in England, are the 'norm' and anybody else can be grouped together as the 'other'. This sits uncomfortably with me, as I have colluded with

the systemic way in which those with marginalised identities receive less research attention, and thus healthcare focus, when those of all non-white ethnicities are grouped together.

This grouping also likely masked some more interesting nuanced results relating to epistemic trust and particular migration patterns, different forms of prejudice and racism experienced by different groups, and how these relationships might impact upon an individual's level of epistemic trust, and their experience and relative improvements in therapy.

It would also have been interesting to have more data on the demographics of the therapists in this study. It may be that the level of epistemic trust an individual has for therapists is strongly affected by the particular identity of said therapist (for example if they are from a different ethnic group to the patient, and particularly where that individual has experienced racism or xenophobia from members of that ethnic group).

More widely, there is often a focus on the characteristics of patients that make therapy effective. There is a wealth of evidence on the effectiveness of specific techniques and common factors in therapy, but less so those specific about the therapist, and the interaction between therapist and patient on these factors. I think this can create a harmful impression that therapy is a formula, and therapists the machines that deliver said formula, rather than acknowledging the complexity of therapy and particularly the relationship between therapist and patient. Further, it falsely positions the therapist as

the healthy and the healer, and the patient as the unhealthy, and the one to be healed. This is in stark contrast to evidence suggesting that two thirds of clinical psychologists have experienced mental health problems themselves (Tay et al, 2018). As such, it stands to reason that some of these individuals will themselves have low epistemic trust, and it is not clear how this may impact upon the effectiveness of therapy, particularly where this interacts with the patient's level of epistemic trust.

I would also want to make sure all outcome measures were validated in order that stronger conclusions could be made of the results. Although the existing results are interesting, it is concerning that we cannot be sure that either the ETS or MZQ is truly measuring what we stipulate it is. This being said, it was encouraging that both measures had good internal reliability.

I found conducting the conceptual introduction especially challenging and with hindsight would have sought further guidance earlier. I felt so excited by the data that it was hard to stop myself getting too broad with my focus and becoming overwhelmed.

Finally, I think I could have been more proactive with my data extraction with the NHS trusts. If I had started this at an earlier stage of my research, I would have had some data before the pandemic began. Although, this is clearly with the benefit of hindsight - I couldn't have predicted what was to come! Regardless, it is possible that other issues might have occurred and I would have been protected from a complete loss of particular data if I had extracted the data in stages.

## **Clinical and scientific implications**

I feel I have made a significant contribution to the evidence base as to what makes psychotherapy effective, which will hopefully help to inform clinical practice. Ineffective therapy is not only costly to NHS mental healthcare services, but also incredibly costly to the individual. The time and effort it takes to engage in therapy, and to trust another person with such personal and intimate information about yourself, cannot be underestimated. As such, research suggesting areas in which focus can be made clinically, in order to improve the likelihood of therapeutic effectiveness is vital.

I hope that services may consider using the ETS (once validated) at assessment in order to inform treatment choices, and continue to use it across the course of therapy to examine any shifts throughout therapy sessions.

Scientifically, this research has further illuminated a key concept in mental health difficulties and therapeutic effectiveness. It could be that epistemic trust is a key component in linking childhood adversity/deprivation and/or attachment difficulties, to mental health difficulties in later life, and why it is that some people do not improve after therapy. This could be instrumental in furthering our understanding of those who experience similar life events then differ in their mental health later in life and thus where earlier intervention may be necessary.

## **Future directions for research**

I hope that the wider research on epistemic trust will further the learning from this thesis, in particular conducting similar research within secondary care settings. Of the utmost importance is validating the measures of mentalisation and epistemic trust, and establishing their significance. In particular setting cut-offs, in order that differences can be more distinctly measured.

A child friendly version of the ETS could be very helpful in examining trends longitudinally, as well as examining more closely differences in those who experience difficult life events and go on to develop mental health difficulties, and those who do not.

My research suggests that epistemic trust is both improved by therapy, and improves therapy. Future research should seek to understand the longer-term behaviour of epistemic trust; in particular, whether the improvement in epistemic trust has a lasting effect. Would a patient who gains epistemic trust through therapy be conferred the same advantage as one who had the same trust at baseline? Understanding this could support the case for personalised treatment.

## **Conclusions**

I have discussed what it was that drew me to the project and how my personal experience and perceptions affected what I expected from the thesis results. I have also reflected on how my views were modified by the results and conducting the research. This research was not immune to the effects of the pandemic, but thankfully this

research project could still continue, albeit with slightly different focus. In addition, I considered what I might have done differently if I were to conduct this research again, and how future research may help to improve the evidence base on epistemic trust and further our understanding.

#### **References**

Tay, S., Alcock, K., & Scior, K. (2018). Mental health problems among clinical psychologists: Stigma and its impact on disclosure and help-seeking. *Journal of Clinical Psychology, 74*(9), 1545-1555.