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Saskia Renate Yvonne Knapen

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dr. R. Van
prof.dr. B. Lowyck

Voor mijn ouders,

die hier niet meer zijn

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1

Chapter 1

General Introduction

According to Darwin's Origin of Species, it is not the most intellectual of species that survives; nor the strongest; but the species that is able best to adapt and adjust to the changing environment in which it finds itself.

Leon C. Megginson, 1963

In 2009, I joined an outpatient treatment unit that had recently been set up for people with severe and complex personality disorders (PDs) classified as 'untreatable' by existing psychotherapeutic programs. In the years before, I had worked as a psychiatrist in acute crisis services and came across many patients with severe personality problems, who kept showing up in acute services like 'revolving door' patients but received no comprehensive treatment for their profound suffering. Much to my frustration, these patients were usually turned down by the existing psychotherapeutic programs because they were considered too suicidal, too complex, or insufficiently motivated and therefore unsuitable for psychotherapeutic treatment. Paradoxically, those who seemed to need treatment most were least likely to get it.

Many patients with complex and severe PDs have an unconventional way of seeking help which frequently provokes a dismissive reaction in the other person. Despite careful evidence-based interventions and outspoken intentions to provide the best help, they just seem to 'refuse' to get better, leading to long histories of failed treatments. In the treatment alliance, they are often devaluing, dismissive, and denouncing, become angry easily, seem to manipulate, and unwilling to investigate underlying painful affects, thus achieving no progression or change. Interestingly, they seem to trust their drugs-dealer or abusive partner much more easily than us, but this distrust makes sense considering the fact that sometimes we are the 40th professional in line they encounter. Furthermore, the stigma of a (severe) PD diagnosis, in society as well as in mental health services, often leads in advance to negative expectations and judgment among care providers, interfering with their willingness to provide these patients with real opportunities for help. The stigma of the diagnosis all too often becomes a stigma of being 'untreatable'.

When I first came across the theory of epistemic trust (ET), it helped me to understand 'difficult' patients more easily. The theory of ET provides a radically different view on psychopathology by claiming that mental problems could be considered as an adaptation to aversive (early childhood) experiences and accordingly as a strength rather than a weakness. Seen from the perspective of epistemic trust, the crucial question clinically becomes how seemingly maladaptive behavior could be understood as a consequence of the (attachment) history of the patient and in what way this behavior has been adaptive to overcome and survive previous aversive

experiences. Aversive experiences may not only be traced back to childhood but often also occur in mental health services (or in society), which may have led patients to close themselves off from help even more. The willingness to understand, empathize, and feel compassion for difficult behavior, which is not the same as approving the behavior, is the necessary link to breaking the negative spiral and giving room for consideration of other, new adaptive behavior, which does more justice to the current context in which one operates. I would like to illustrate this with a clinical vignette:

Sanne grew up in a highly aversive environment with a very unstable, alcoholic mother and absent father. Her mother frequently took her to hospitals for diagnosis and treatment, leading her to miss school a lot. There was profound neglect; already at a very young age Sanne was left alone for days and had to provide for her own food and care. Mother told her she wished Sanne had never been born and that she was no good. Because of her frequent absence, Sanne performed very badly at school. She was unable to carry out seemingly simple tasks, for which she was bullied and humiliated, both by peers and teachers. This led to the profound belief that she was a completely incapable person. When she was twelve years old, she was placed into childcare and grew up in institutions. By then, Sanne was already distrustful of most people. She showed oppositional angry behavior, got addicted to various narcotic drugs, joined activistic groups, and lived in the squatter scene. When I met Sanne, she was almost unable to reach, she was very defensive, could explode into a terrible rage, and often acted very unreasonably. This made it very hard for both friends and aid workers to put up with her and they often broke off contact – exhausted – deepening Sanne's belief she was no good and making her call herself 'toxic waste'. Given her terrible history, it was understandable that Sanne was so hard to reach, and it took a lot of time, effort, and patience trying to understand her sometimes erratic behavior. Her deep anger about having to come to therapy could much later be understood as a very intense and profound fear of failure, fueled by her strong conviction she was good for nothing and would fail just like in school. Furthermore, her anger was the only thing that kept her running all these years. It was the only way she knew to protect herself against failure and humiliation and it gave her the strength to detach herself from her mother. Also, anger helped her to ward off intense, life-threatening affects like grief, shame, and a profound feeling of being no good. From Sanne's perspective, her behavior made sense. Feeling gradually more understood, Sanne could soften her reactions, which cautiously restored

and improved her contact with other people, which in turn further boosted her improvement.

This thesis aims to unravel parts of the theory of epistemic trust in an empirical way. In this introductory chapter, epistemic trust, and its relations to attachment, mentalizing, and personality disorders will be introduced first. Then, the purpose of the current research will be highlighted, leading to an outline of the research questions and an overview of the chapters that address these questions.

Epistemic Trust

The concept of epistemic trust is rooted in developmental psychopathology and attachment theory and refers to the capacity to consider conveyed knowledge as trustworthy, relevant to the self, and generalizable to other contexts (Fonagy & Allison, 2014; Fonagy et al., 2015). ET is described as an evolutionary adaptation evolved to be able to receive social information from (better informed) caregivers. A balance between openness and trust to learn from others on the one hand and a healthy vigilance to protect against potentially harmful misinformation on the other hand, is crucial to survive in the cultural environment. Typically, children learn in early attachment relationships to recognize who is trustworthy, authoritative, and knowledgeable (Corriveau et al., 2009). ET is therefore thought to be closely interconnected with developmental experiences such as childhood adversity, attachment insecurity, and the capacity to reflect on mental states (i.e., mentalizing) (Jurist, 2018; Jurist, 2005).

(Early) adversity, mentalizing, and attachment

Mentalizing is an evolutionary pre-wired central human capacity, and it is considered that most if not all forms of pathology can be expected to be characterized by temporary or chronic impairments in the capacity to mentalize (Luyten et al., 2020). Impairments in mentalizing in childhood have been related to a wide array of cognitive and socioemotional problems, ranging from attention and effortful control, and academic achievement to emotion regulation and interpersonal problems, and internalizing and externalizing problems (Fonagy & Luyten, 2018; Fonagy et al., 2016). Mentalizing is viewed as fundamentally interactive as it develops in the context of interactions with others and is therefore relationship- and context-dependent and

refers to dynamic state- and context-dependent processes. The capacity for mentalizing is first acquired in the context of early attachment relationships. Parental reflective functioning fosters the development of secure attachment in a child as well as the child's capacity for reflective functioning and, consequently, emotional and interpersonal functioning. Secure attachment experiences typically buffer the effects of stress in early development, where insecure attachment leads to increased vulnerability to stress (Luyten et al., 2020). It has been argued that the pathogenic effects of childhood maltreatment are mediated by mentalizing incapacity (Li et al., 2020) and attachment insecurity (Muller et al., 2012). However, although attachment and mentalizing play an essential role in psychological development, the relationship seems less strong than expected (Afifi et al., 2011; Fearon et al., 2010; Fraley, 2002; Groh et al., 2012; Madigan et al., 2013; Pinquart et al., 2013; Zeegers et al., 2017). To account for this, Fonagy and colleagues suggest that the generic susceptibility to psychopathology may also be mediated by (a lack of) epistemic trust (Fonagy et al., 2017a, 2017b).

The mediating role of Epistemic trust between adversity and mental health problems

Following the model of ET, early negative childhood experiences not only lead to attachment insecurity and impaired mentalizing but also dispose an individual to adopt a rigid and pervasive hypervigilant position toward information coming from others, resulting in high levels of Epistemic Mistrust (EM) (Fonagy et al., 2015; Fonagy et al., 2017a). In the context of an inherently untrustworthy social environment, closing oneself to others may be seen as an effective adaptation and may have a considerable survival value in the short term. However, in the long term, this mistrust may become a rather stable personality feature, defining the more general tendency of a person to be open or closed off towards (social) information from others and generate significant difficulties later. Recent versions of the theory have also introduced the concept of epistemic credulity (EC) which refers to a lack of vigilance and discrimination, resulting in excessive and inappropriate trust in others, and in vulnerability to misinformation and potential risk of exploitation (Campbell et al., 2021; Liotti et al., 2023). In this way, childhood adversity may create long-term disruptions in the capacity to adapt by compromising social learning (Elklit et al., 2018; Germine et al., 2015; Hanson et al., 2017) and may lead to an (implicit) attitude of mistrust in the social environment. It is

assumed that this mistrust and credulity is nurtured by impaired mentalizing. This rigid stance makes it more difficult to navigate the social world and, in that way, may lead to negative beliefs about oneself through negative experiences with others and self-functioning. In turn, the model assumes that this incapacity to adapt flexibly to the social world affects someone's resilience and, in this way, increases the risk of developing psychopathology (Fonagy et al., 2015; Luyten et al., 2020).

Other social contextual factors and learning processes like peers, people in the community, and sociocultural influences, also influence the development of epistemic trust. Developmental studies on selective trust found that children base their trust in information on epistemic cues such as past accuracy, relevant expertise, informativeness, a majority opinion, and good reasoning, and on social markers like age, appearance, prosocial behavior, familiarity, and similarity. When there is conflict between these cues, they tend to prioritize epistemic cues over social ones. Selective trust and attachment are related: insecure attachment impairs selective trust. In non-clinical adults there is evidence that people may become more aware of potential deception and misinformation with age and therefore become more vigilant (Li et al., 2023).

The theory of epistemic trust has led to an important shift in our view on attachment, in the sense that specific attachment styles could reflect which type of social communication in a particular family context is promoted as it provides the most effective way to function in that environment. In this context, epistemic trust is seen to foster resilience to adversity through a health-generating (salutogenic) process. Figure 1 shows a model of the supposed relationship between childhood trauma, epistemic trust, attachment, mentalizing and (borderline) personality disorder.

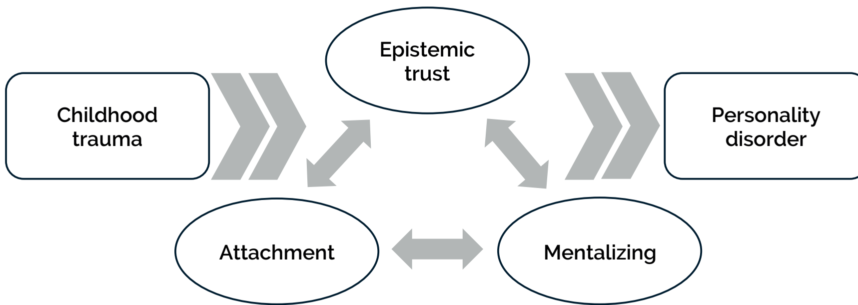

Figure 1 Supposed relationship between childhood trauma, epistemic trust, attachment, mentalizing and (borderline) personality disorder

Epistemic Trust and Personality Disorders

Although the model of ET is essentially transdiagnostic, a more intrinsic relationship between epistemic mistrust and the development of personality disorders (PDs) is assumed (Fonagy & Allison, 2014; Fonagy et al., 2015). From the perspective of ET, PDs are conceptualized as a failure of communication arising from an impaired capacity to learn from others. Evidence suggests that interpersonal impairments are central to PDs (Hopwood et al., 2013), and appear to be the most stable dimension in PD patients (Skodol et al., 2005). Given the assumed close relation between interpersonal impairments and ET, it is suggested that ET may be a key factor that accounts for the liability to developing borderline personality disorder (BPD) and other types of psychopathologies (Nolte et al., 2023). Patients with BPD are characterized by a bias in their perception of others as being hostile and untrustworthy, they tend to expect that others will reject, hurt, abandon, criticize, neglect them, or treat them dishonestly (Fertuck et al., 2018). Importantly, the relevance of ET may not be restricted to BPD, since it has also been argued that BPD rather represents a general factor of severity of personality pathology instead or merely a specific type (Sharp et al., 2015).

Relevance of the thesis

Even though the theory of epistemic trust seems to be widely accepted and supported in the field of personality disorders and shows important clinical relevance, until now it remains rather abstract what epistemic trust actually entails. Furthermore, ET is a mostly theoretical concept that relies mainly on indirect and little empirical evidence. At the start of this thesis project, there were no means to measure epistemic trust and no empirical studies had been done to substantiate the theoretically assumed model.

Concurrently, two empirical studies have been conducted to underpin the theoretical assumptions about epistemic trust (Campbell et al 2021, Liotti, et al 2023). They found significant associations between both epistemic mistrust and credulity and low mentalizing abilities, as well as higher levels of childhood adversity, insecure attachment, and symptoms of mental health disorder. In addition, EM and EC were found to partially mediate between early adversities and psychopathology. A limitation of both studies is that they were conducted in community samples only and did not investigate the relationship with PDs nor accounted for attachment and mentalizing in the mediation between adversities and psychopathology. Only very recently a comprehensive review of 15 studies that investigated the relationship between epistemic trust, psychopathology, and psychotherapy, concluded that there is preliminary evidence for the theoretical assumption of epistemic trust (Li et al., 2023).

The theory of epistemic trust may provide many new opportunities, such as a better understanding of the emergence of psychopathology and the interplay with resilience and salutogenesis. Furthermore, epistemic trust may be considered as a final common pathway through which aversive relational experiences in the past, through their effect on the therapeutic relationship, may exert their influence on treatment outcome. There is indeed abundant evidence that interpersonal trauma is a strong etiological factor, disposing for a range of mental disorders (Afifi et al., 2011; Battle et al., 2004; Hengartner et al., 2013; Scott et al., 2012). The Alternative Model of PDs identifies interpersonal dysfunctioning as one of two basic dimensions of personality disorder (Bender et al., 2011) as evidence suggests that interpersonal impairments are central to PDs (Hopwood et al., 2013). Disabilities in social relationships appear to be the most stable dimension in PD patients (Skodol et al., 2005) and the severity of interpersonal pathology has been demonstrated to be a powerful predictor of outcome (Gunderson et al., 2006). One of the most obvious ways through which this basic interpersonal impairment exerts its influence on treatment outcome is through its effect on the quality of the therapeutic relationship which has been repeatedly shown to be one of the strongest predictors of therapy outcome independent of diagnosis or therapy method (Barnicot et al., 2012; Barnicot et al., 2011; Cameron et al., 2018; Fluckiger et al., 2018; Sauer et al., 2010). From a personalized medicine-oriented perspective, one of the most important issues may be to identify prior to treatment which patients may or may not benefit from specialized treatment and why this is the case. If we would have

a marker to identify patients at risk for not completing treatment or benefitting only marginally from treatment, this could inform our decision to assign them to highly specialized treatments that may consider the impairments underlying this risk from the start. Making epistemic trust open for assessment may therefore have important clinical utility.

General aim and hypothesis

The general aim of this thesis was threefold:

1. Clarification of the concept of epistemic trust by defining the clinical features of epistemic trust and mistrust.
2. Making epistemic trust measurable by developing and validating a clinically feasible measurement instrument.
3. Generating some basic empirical support for the theoretical assumptions about epistemic trust and childhood adversity, attachment, mentalizing, and personality pathology.

Context

We will present data collected in both a community sample and two clinical samples consisting of patients with severe and complex personality disorders on the one hand and patients with more general anxiety disorders mostly without the presence of personality disorders on the other hand. We explicitly opted for a severely impaired clinical sample, because we expected the phenomenon of epistemic mistrust to preeminently occur in this group. No studies have yet been published investigating EM in a sample where the phenomenon is assumed to be strongly present.

The first sample was a convenience sample recruited in the community with the assistance of students in clinical psychology through social media. The second sample was recruited at the AMBIT (Adaptive Mentalization Based Integrative Treatment) unit, an outpatient unit for patients with severe and complex personality disorders in Altrecht, a Dutch Mental Health Institution. The final and third sample of patients was recruited at the Academic Anxiety Center of Altrecht. This sample was recruited given the assumed trans diagnostic and dimensional character of ET/EM. The study was approved by the institutional medical ethical review board (number CWO-1911).

Thesis Content

In **Chapter 2** we describe the conceptual foundations of this thesis by identifying ET as a common final pathway through which adversity leads to mental health problems. We hypothesize that epistemic mistrust also affects the therapeutic encounter, thereby reducing the ability to benefit from treatment and therefore may act as a psycho-marker to predict the outcome of psychosocial interventions. The main objective of this paper was to introduce the concept of ET in the field of treatment assignment and argue for its potential clinical utility in any assessment prior to treatment assignment. We hope this may ultimately enable a more effective and personalized treatment assignment.

Following up on this conceptualization, in **Chapter 3** we aimed to make ET accessible for assessment by reaching consensus on the definition and clinical features of ET by means of a Delphi study. The Delphi experts were all clinically and/or scientifically active in the field of personality disorders, mentalization, and epistemic trust. The output of this study was a consensus definition, a range of clinical features and related items for assessing ET.

In **Chapter 4** we focus on the development and validation of an assessment instrument, the Questionnaire Epistemic Trust (QET), based on the clinical features of ET that may be feasible to administer in both clinical practice and large-scale empirical studies. We present the preliminary results on the psychometric properties of the QET, including the procedure that was followed to reduce and refine the initial version of 49 items and discuss the factor structure, internal consistency. In addition, we will also present data on convergent validity by analyzing correlations between the QET and measures for severity of personality, general psychopathology, quality of the working alliance, and quality of life.

In **Chapter 5** we aimed to investigate the degree of ET in different clinical and a community samples and to explore the assumed association between ET, PDs, and the severity of PDs. This study aimed to test (i) whether ET is more impaired in patients with personality disorders compared to patients with anxiety disorders, (ii) whether ET is more impaired in patients compared to people in the community and (iii) whether ET is associated with severity of personality pathology and (iv) whether ET is more specifically associated with features of BPD.

The aim of **Chapter 6** was to examine the relationship between ET and conceptually related concepts such as attachment and mentalizing. More specifically, we wanted to test the hypothesis that ET plays a mediating role between (different types of) childhood maltreatment and the development of BPD and how this role relates to the mediating role of attachment and mentalizing.
Finally, **Chapter 7**, the general discussion, summarizes our research findings, reflects on the findings in light of the current evidence, and discusses implications to clinical practice and future research.

I hope that my efforts will eventually contribute to more justice being done to people who suffer from serious complex (personality) problems. By better understanding them, we might be able to reduce stigma and improve treatment allocation, which eventually might make them able to come out of their social isolation and participate in and be valued by society again.

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Chapter 2

Epistemic trust as a psycho-marker for outcome in psychosocial interventions

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ABSTRACT

Although there is increased therapeutic optimism surrounding the treatability of personality disorders, a significant subgroup of patients seems not to benefit sufficiently from treatment. Not completing treatment especially has been associated with poor outcomes, high societal costs and reduced cost-effectiveness of therapy. (B)PD patients therefore are at risk for engaging in different subsequent treatment services, but only benefitting limitedly from these.

From a personalized medicine-oriented perspective, one of the most important issues may be to identify prior to treatment which patients may or may not benefit from specialized treatment and why this is the case. If we would have a marker to identify patients at risk for not completing treatment or benefitting only marginally from treatment, this could inform our decision to assign them to highly specialized treatments that may consider the impairments underlying this risk from the start.

This paper explores the potential value of the recently introduced concept of epistemic trust as a potential 'psycho-marker' to differentiate between patients who may or may not benefit from different types of treatment. We argue that epistemic trust may be a final common pathway through which aversive relational experiences in the past may exert their influence on the efficacy of a specific treatment.

Epistemic trust may be a proximal and measurable factor of this final common pathway, assessable both as a disposition of the patient and as a characteristic of the therapist-patient encounter and therefore a suited candidate to predict (lack of) benefits from (specific) treatment approaches.

INTRODUCTION

Despite increased therapeutic optimism surrounding the treatability of personality disorders (PDs), a significant subgroup of patients seems not to benefit sufficiently from treatment. A prospective follow-up study showed that during a period of 16 years, most BPD patients did not achieve sustained recovery (Zanarini, Frankenburg, Reich, & Fitzmaurice, 2012). More specifically, although treatment and time may help to mitigate symptoms of (borderline) PD, social and vocational impairment show a striking persistence throughout time in about 40% of BPD patients. Furthermore, several studies have shown that severe PD patients are prone to drop out from treatment and therefore not receive a dosage of treatment that may be necessary for recovery (Webb & McMurran, 2009; Zanarini, Frankenburg, Jager-Heyman, Reich, & Fitzmaurice, 2008; Zanarini, Frankenburg, Reich, & Fitzmaurice, 2010; Zanarini et al., 2008). Not completing treatment has been shown to be associated with poor outcomes (Chiesa, Drahorad, & Longo, 2000), high societal costs (Van Asselt, Dirksen, Arntz, & Severens, 2007) and reduced cost-effectiveness of therapy (Wierzbicki & Pekarik, 1993). (B)PD patients therefore are at risk for engaging in different subsequent treatment services, but only benefitting limitedly from these. Compared to other mental disorders, BPD patients indeed are in treatment for a longer time, receive more different forms of treatment, contact crisis services more frequently and use multiple medications (Bender et al., 2001; Zanarini, Frankenburg, Reich, Conkey, & Fitzmaurice, 2014). This may not only lead to demoralization in patients and treatment staff but is also costly for society.

Given the impaired capacity of many BPD patients to fully engage and benefit from treatment, many specialist psychotherapies for BPD focus explicitly on engaging patients in treatment and keeping them motivated for change, e.g. Dialectical Behavior Therapy (Linehan et al., 2006) and Mentalization-Based Treatment (Bateman & Fonagy, 2004). Their effects seem to be superior to treatment as usual (Christea et al., 2017), but for various reasons these specialist treatments are only limitedly available for BPD patients (Hermens van Splunteren, van den Bosch, & Verheul, 2011). More recently, randomized trials demonstrated (almost) equal efficacy of ‘generalist’ treatments, based upon general principles, including Structured Clinical Management (Bateman & Krawitz, 2013) and Good Psychiatric Management (Gunderson, 2014), as compared to

these specialist treatments (Christea et al., 2017). However, there are also some indications that these specialist treatments may be superior to generalist treatments in keeping patients in treatment (Laurenssen et al., 2018) and that they are more effective in treating very severe personality disordered patients (Bateman & Fonagy, 2013). Therefore, even if generalist treatments for BPD may be easier to implement and may on average be as effective as specialist psychotherapy, a subgroup of patients may only benefit sufficiently from specialist psychotherapy.

These findings highlight the important issue of treatment assignment. From a health-economics and patient-oriented perspective, one of the most important issues may be to identify prior to treatment which patients may or may not benefit from different types of more or less specialized treatment and why this is the case. Indeed, if we would have a marker to identify patients at risk for not completing treatment or benefitting only marginally from treatment, this could inform our decision to assign them to highly specialized treatments that may consider the impairments underlying this risk from the start. Other patients – considered to be at low risk for not benefitting – could be assigned to more generalist approaches that may be easier to implement. This would allow a more personalized approach to treatment assignment and to tailoring specific needs for treatment to the specific characteristics of the patient.

This paper explores the potential value of the recently introduced concept of 'epistemic trust' (Fonagy & Allison, 2014; Fonagy, Luyten, & Allison, 2015; Fonagy, Luyten, Allison, & Campbell, 2017a + b) as a potential 'psycho-marker' to differentiate between patients who may or may not benefit from different types of (more or less specialist) treatment. Although the concept of epistemic trust builds upon a vast area of previous research and theoretical concepts, articulating the role of early (aversive) relations in human personality development, it adds a dimension of (defective) social learning which is innovative in our understanding of psychopathology. The aim of this paper is to use this line of reasoning to better understand treatment failure in PD patients. More specifically, we will argue that 'epistemic trust' may be a final common pathway through which aversive relational experiences in the past, resulting in interpersonal dysfunctioning in the patient and their combined impact on the quality of the therapist relationship, may exert their influence on the efficacy of a specific treatment encounter. Moreover, we will argue that epistemic trust is a proximal and

measurable factor of this final common pathway, assessable both as a disposition of the patient and as a characteristic of the therapist-patient encounter. If this is the case, ET may be a suited candidate to predict (lack of) benefits from (specific) treatment approaches. Therefore, the goal of this paper is to provide an overview of the existing literature on epistemic trust and establish support for the hypothesis that epistemic trust can act as a psychomarker for psychosocial interventions. We will start with a brief discussion of the approach of Personalized Medicine and its potential usefulness for the field of PDs.

Personalized Medicine

Personalized medicine (PM) has its origin in medical science and is described as "tailoring medical treatment to the individual characteristics, needs and preferences of each patient." (US Food and Drug Administration, 2013, pp. 4). The need for personalized medicine arose in pharmaceutical therapy as a reaction to the one-treatment-fits-all mentality, where standard medications were prescribed, even when as few as 1 in 50 benefited (Mukherjee & Topol, 2002). Now, PM is widely used in treatment of physical diseases. For example, in the treatment of cardiovascular disease and cancer, where PM is used with the goal of improving diagnosis and treatment results (Ginsburg & Willard, 2009).

Recently, the field of mental health care has also become increasingly interested in PM, aiming to improve the efficacy of existing psychological and pharmaceutical treatments. As described by Schneider, Arch and Wolitzky-Taylor (2015), "Matching people to the best treatment for their particular characteristics, if possible, could increase the effectiveness of that treatment for them, resulting in greater efficacy overall" (pp. 40). The goal of PM is therefore to identify which factors or characteristics (so called markers) predict or determine the outcome of a specific treatment, in order to optimize the match between the person and the received treatment. Markers can include biological factors, like genetic and epigenetic alterations (biomarkers), but also psychological mechanisms or characteristics, so-called psychomarkers, that could predict vulnerability for disease or determine response to treatment. Building on that, Hamburg and Collins (2010) describe in their article that "the success of personalized medicine depends on having accurate diagnostic tests that identify patients who can benefit from targeted therapies" (pp. 302).

As described earlier, we argue that a one-size-fits-all approach in the treatment of personality disorders would similarly produce suboptimal results. Identifying what works for whom may be one of the most crucial questions in further improving the effectiveness of care. One of the major challenges from a PM approach is to identify markers that allow a personalized approach. We think that epistemic trust may be a promising candidate and propose that the degree of epistemic trust can be seen as a distinctive personal disposition which influences therapy outcome and therefore can serve as a psychomarker to help assign appropriate and tailored treatment to improve treatment efficacy.

Epistemic trust

The concept of epistemic trust (ET) was introduced by Fonagy and Allison (2014) to describe the core interpersonal impairment of people suffering from psychopathology, most notably borderline personality disorder (BPD). Importantly, the relevance of ET is not restricted to BPD, although it may be one of the core features of BPD given the centrality of disorganized attachment and interpersonal dysfunction in BPD. Fonagy and Allison define ET as "the individual's trust that new knowledge from another person is authentic, trustworthy, generalizable and relevant to the self" (p. 373). They place ET within an evolutionary framework, describing it as an adaptation evolved in order to be able to receive social information from (better informed) caregivers. This adaptation allows the child to benefit from the complex knowledge of its immediate culture, which is crucial to survive in the cultural environment. The purpose of ET is transmission of culturally relevant information from one generation to the other. It presupposes a balance between an openness and trust to learn from others and a healthy vigilance to protect against potentially harmful misinformation. The development of ET is therefore closely related to the development of social cognition, allowing a child to read sufficiently well the intentions of others and differentiate between trustworthy others (and their information) and untrustworthy others (Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy, et al., 2017b).

Developmentally, ET is associated with a safe attachment context, while aversive childhood experiences are thought to dispose an individual to become dominantly epistemically mistrustful or chronically hypervigilant (Fonagy & Allison, 2014; Fonagy, et al., 2015; Fonagy, et al., 2017b). In such states, people are excessively mistrustful

towards others and disregard the information they convey. Information from others is met with skepticism and mistrust. Fonagy and colleagues (2015) assume that this mistrust is nurtured by impaired mentalizing, more specifically hypermentalizing. Hypermentalizing refers to the over-interpretation of the intentions of others as malevolent and therefore insincere (Sharp et al., 2013). Once established, epistemic (mis)trust may become a rather stable personality feature or disposition, defining the more general tendency of a person to be open versus closed off towards information from others, enabling or disabling their capacity to learn socially from others. In a healthy developmental context, epistemic trust provides the person with a relatively permanent (personal) ability to learn from others and thus to continuously refine and extend their knowledge, increasing their flexibility to adapt to varying conditions in their lives. Aversive early interpersonal events, related to an unsafe attachment context, may however result in a more permanent excessive suspiciousness about other people's intentions, related to a closing off from their information, leading to a harsh rigidity in their world views. Fonagy and colleagues call these patients 'hard to reach'. They easily misread others' intentions and avoid accepting or integrating potentially helpful corrections to their beliefs.

The relational nature of psychopathology and treatment

Relations are fundamental to the liability for psychopathology and to its treatment. There is abundant evidence that interpersonal trauma is a strong etiological factor, disposing for a range of mental disorders (Scott, McLaughlin, Smith & Ellis 2012). Aversive interpersonal childhood experiences, including neglect, emotional abuse and sexual trauma, are probably most specifically associated with the onset and development of borderline PD (Afifi et al., 2011; Battle et al., 2004; Hengartner, Ajdacic-Gross, Rodgers, Müller, & Rössler, 2013; Scott, McLaughlin, Smith, & Ellis 2012). The Alternative Model of PDs identifies interpersonal dysfunctioning as one of two basic dimensions of personality disorder besides self dysfunctioning (Bender, Morey, & Skodol, 2011). Furthermore, recent evidence suggests that interpersonal impairments are central to PDs (Hopwood, Wright, Ansell, & Pincus, 2013). Whereas identity issues seem to differentiate milder forms of personality pathology, interpersonal issues seem more discriminating at the severe levels of personality pathology (Morey et al., 2011). Moreover, disabilities in social relationships appear to be the most stable dimension in

PD patients (Skodol et al., 2005), which was also evidenced by the symptom-functioning gap in recovery in the study by Zanarini and colleagues (2012).

Interpersonal disabilities may not only be critical to understand and treat personality pathology, they may also be more intrinsically associated with several forms of symptom disorders. Recent hierarchical models of psychopathology have identified interpersonal personality dimensions - i.c. Detachment and Antagonism – as upper-level dimensions that overarch different sub-spectra and clusters of symptoms and syndromes (Kotov et al., 2017). The inability to relate and connect intimately to other people and the (resulting or associated) disposition to oppose (antagonism) others or withdraw (detachment) from them, seem to capture core aspects of psychopathology in general. Not surprisingly, the severity of interpersonal pathology has been demonstrated to be a powerful predictor of outcome (Gunderson et al., 2006).

One of the most obvious ways through which this basic interpersonal impairment exerts its influence on treatment outcome, is through its effect on the quality of the therapeutic relationship. The quality of the therapist alliance has repeatedly shown to be one of the strongest predictors of therapy outcome independent of diagnosis or therapy method (e.g. Cameron, Rodgers, & Dagnan, 2018). In a recent meta-analysis, Flückiger and colleagues (2018) analyzed data from 295 studies, covering over 30.000 patients. They found a robust alliance-outcome association of r=.278, equivalent to an effect size of d=.579. Being able to establish a strong working alliance and a secure attachment to the therapist, improves the reduction of distress over time (Sauer, Anderson, Gormley, Richmond, & Preacco, 2010), prevents drop-out and improves treatment outcome (Barnicott, Katsakou, Marougka, & Priebe, 2011; Barnicot et al., 2012). Lacking these skills – associated with a more generalized interpersonal dysfunction – may prevent a strong alliance to develop and may result in increased risk of drop out and treatment failure.

In line with Fonagy's concept of epistemic trust, we propose that an important pathway through which aversive interpersonal trauma and (associated) interpersonal dysfunctioning impact upon outcome is through its impact on the disposition to be generally epistemically (mis)trustful. Moreover, the way the therapist relationship may impact upon outcome is through its ability to – sometimes despite a disposition of

epistemic mistrust – elicit epistemic trust in patients and therefore open their openness to learn socially and incorporate the insights, changed beliefs, skills or advice the therapist offers.

Epistemic trust as a final pathway

Psychopathology in general and personality pathology in particular are determined by a range of biological, psychological and social factors. Constitutional factors interact with early caregiving context to create brain and personality structures that will in turn shape and be further shaped by later experiences. A combination of unfavorable constitutional factors and aversive early experiences may dispose an individual to develop psychopathology. Recent hierarchical empirical models suggest psychopathology is best explained by a general liability (Caspi et al., 2014) and some broad personality-related spectra (Kotov et al., 2017). This suggests that some common trans diagnostic features of psychopathology are at work, including a genetic propensity (Selzam, Coleman, Caspi, Moffitt, & Plomin, 2018) and common etiological factors, like trauma. In this paper we do not primarily argue that ET explains this liability for psychopathology. However, we focus on the argument that ET serves as a final common pathway through which this constellation of factors exerts its impact on the observed inadequacy of generalist treatment for PD and other (complex) patients.

Psychosocial interventions, including psychotherapy, are indeed 'social' in nature. They imply a personal encounter between a professional or caregiver and a patient. Within this encounter, potentially helpful information – including modified narratives, alternative beliefs, emotion regulation skills, medication prescriptions or whatever advice or insight might be helpful – is being conveyed from the professional to the patient. However, whether this will ultimately lead to social, emotional, cognitive and/or behavioral changes, will depend on the ability of the patient to accept, value and integrate this information. Referring to the concept of epistemic trust, it requires from the patient to release vigilance and mistrust and instead 'open up' to the information offered. The ability to do so may both depend on the dispositional (mis)trust as resulted from the attachment history of the patient, and on the capacity of the therapist to overcome this dispositional mistrust and trigger (epistemic) trust within this specific interpersonal context.

We propose that ET is a refinement of the general observations regarding the importance of interpersonal dysfunction and the quality of the therapist alliance in predicting outcome. It identifies aspects of the interpersonal dysfunction that matter to the issue of social learning, which is a pre-requisite for the transfer of skills, advice, insight and other modes of information within a therapeutic encounter. Being a proximal and measurable part of the pathway preventing change in treatment (and in the outside world), ET/EM may be practically very useful. Being immediately relevant to the transfer of information that could open perspectives for change, ET/EM may be a powerful predictor for potential success of treatment. Therefore, we argue that ET/EM may be a relevant and assessable psycho-marker that could assist in treatment decisions.

Epistemic trust as a psycho-marker

In our view ET may be considered as a personality feature related to the interpersonal dysfunctions as identified in the AMPD. However, it also refines the specific impairment that is relevant for the encounter in therapy preventing change to occur, independent of the specific trait-like appearance (antagonistic or detaching) it may take on in a particular patient. As a disposition, ET may be relevant to investigate in any person applying for psychosocial interventions. However, as being related more specifically to unsafe attachment and aversive interpersonal experiences, it may be in the same time characteristic for BPD and explain the remarkable high level of treatment failure in BPD patients in particular. We want to argue that ET/EM holds promise for being a psycho-marker to identify patients 'at risk' for treatment failure as it provides us with an accessible feature of the person that may help to determine his or her eligibility for interpersonally driven help.

ET should not be considered as a necessary fixed characteristic of a specific therapist alliance neither. Obviously, it will strongly impact upon a patient's initial openness and ability to engage in a specific relationship. It may be hypothesized that the more severe the dispositional EM, the more likely it will undermine the alliance and make it less effective or even detrimental. However, skillful therapists may be able to connect with the patient, attune to his or her emotional experience (including experiences of unsafety and suspiciousness) and understand the patient 'from within' to restore or re-trigger epistemic trust within that moment (Kamphuis & Finn, 2018). The ability to keep

a mentalizing stance and thereby support more accurate social cognition in the patient may be a core determinant.

Specialist treatment and the restoration of epistemic trust

In this paper we somewhat arbitrarily distinguished between 'regular' and 'specialist' treatment. This distinction may be misleading. What may distinguish both specialist and generalist PD treatment from treatment as usual is an explicit model of PD and an explicit focus on an active and welcoming basic stance and on the quality of the therapist alliance. In many 'regular' treatments, the therapist alliance is not so explicitly the focus of attention, which may in epistemically mistrustful people disable social learning. Furthermore, specialist treatments may provide the therapist with a range of specific interventions (e.g. mentalizing techniques) to improve the quality of the therapist alliance, which may be necessary for some very mistrustful patients, characterized by severe personality pathology. However, some skillful therapists may not even need specialist treatments to connect with even the most mistrustful patients. They may have a natural capacity to elicit trust in others by matching wonderfully well with their emotional needs.

DISCUSSION

This paper described ET/EM as a measurable final pathway through which interpersonal trauma, interpersonal dysfunction and the nature and quality of the therapist relationship affect outcome in treatment. We aimed to offer a helpful different perspective on tailoring treatment to individual patients. The concept of ET builds on a vast base of earlier research on attachment, interpersonal relations and treatment alliance. The main objective of our contribution was to link the concept of ET to 'personalized medicine' as we believe it may inform a risk profile identifying patients at risk for not benefitting from treatment that does not sufficiently take into account these impairments. Thereby, we wanted to theoretically underpin the potential utility of the concept of ET as a tool that can be used in the assessment of patients before treatment assignment, more specifically, to determine which patients may require highly specialist treatment as opposed to treatment as usual. In our opinion, this may expand the concept of Fonagy and colleagues to the field of treatment assignment

and lay a conceptual foundation for empirically investigating the clinical utility of the concept.

Fonagy and colleagues (Fonagy, Luyten, Campbell & Allison, 2014) link the concept of ET to a general psychopathology (or 'p') factor, transdiagnostically underlying psychopathology (Caspi, Houts, Belsky, Goldman-Mellor, Harrington, Israel, ... & Moffitt, 2014). The 'p-factor' is assumed to provide a comprehensive explanation for the extensive comorbidity among psychiatric disorders. Fonagy and colleagues argue that ET might underpin the p-factor, referring to the rigidity of severely disordered patients, which they attribute to their deficits in social learning. They therefore assume that ET may be in the heart of all effective psychotherapeutic interventions. We proposed that EM can act as a measurable predictor or psychomarker of treatment outcome. In this way it has the potential to play an important role in personalizing treatments for PD's. (Ozomaro, Wahlestedt, & Nemeroff, 2013). ET/EM may be assessed as a psycho-marker at the start of treatment in order to assist clinical decisions regarding treatment assignment. We argued that epistemically highly mistrustful patients may probably benefit more from specialist treatment and/or very skillful therapists. Outcome variation may be less pronounced for epistemically more trustful patients as their openness to social information may be less dependent on the quality of the encounter.

Throughout this paper we have used ET/EM in a double sense. Basically, we have described ET/EM as a disposition, which describes a person's tendency to be open or closed off from social information. However, we also described ET/EM as being sensitive to the specific encounter in a specific relationship. Despite dispositional mistrust, ET may be triggered in a specific relationship. We believe this is a common approach in personality psychology: a given disposition or trait may determine someone's psychological functioning most of the time – and thus be characteristic for this person - but this doesn't mean that the disposition will be activated all the time (APA, 2013). Similarly, recent attachment theories distinguish between attachment traits and attachment states (Bosmans, Bowies, Dewitte, De Winter, & Braet, 2014), stressing the context-dependency of attachment style. Similarly in ET, the relational context may determine the fluctuation of specific attachment states, but activation of specific states may also in turn shape and modify attachment as a trait. These theories thus stress the dynamic interplay between traits and states. Epistemic mistrust therefore

may be dispositional, predicting risk for unfavorable outcomes, but the actual outcome will probably depend on the specific qualities of the therapist to overcome this disposition and trigger epistemic trustful states which may ultimately also impact upon the ET disposition.

If ET is a potential psycho-marker, it should be made accessible for clinical assessment prior to treatment. This requires an operational definition of the rather abstract concept of ET. Furthermore, most research paradigms rely upon experimental procedures, which are difficult to apply in generalist clinical practice. If ET would indeed be a useful psycho-marker, it could benefit from easy assessment, as in a brief questionnaire. We believe an important next step would be the design of a valid instrument assessing epistemic trust dimensionally. As noted, the main objective of this paper was to introduce the concept of ET in the field of treatment assignment and argue for its potential clinical utility in any assessment prior to treatment assignment. Following up on this conceptualization, our research group will develop an assessment instrument that may be feasible to administer in large scale empirical studies in order to empirically test these hypothesis. Therefore, we will design a Delphi procedure to reach consensus on the clinical features of ET, as a foundation for the design of a questionnaire measuring ET. We hope this may ultimately enable a more effective and personalized treatment assignment.

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3

Chapter 3

Defining the concept and clinical features of Epistemic Trust: a Delphi study

Knapen, S., van Diemen, R., Hutsebaut, J., Fonagy, P., & Beekman, A. (2022). The Journal of Nervous and Mental Disease, 210(4), 312-314.

ABSTRACT

Early identification of 'patients at risk' for not completing regular treatment or not benefitting (sufficiently) from treatment might be among the most cost-effective strategies in mental health care. The recently introduced concept of Epistemic trust (ET) may have the potential value to predict 'patients at risk' and therefore act as a marker of treatment outcome. We argue that ET may be the final common pathway through which aversive relational experiences in the past result in interpersonal dysfunctioning, which in turn result in dysfunctional therapeutic relationships, rendering it difficult for patients to trust whatever is offered to learn in therapy. Hence the concept of ET can play an essential role in personalized medicine, allowing for a more tailored treatment assignment to specific patients' characteristics, which may improve treatment outcomes. In this brief report we define the clinical features of epistemic trust by describing its core domains based on consensus of expert opinion on the concept. The response rate was high and there was a high level of agreement across experts, demonstrating a strong consensus between experts on the definition and clinical features of epistemic trust and mistrust and its significance to the understanding of personality disorders.

By means of having a clear definition of the clinical features of ET we hope to make it accessible for assessment.

INTRODUCTION

Early identification of 'patients at risk' for not completing regular treatment or not benefitting from treatment might be among the most cost-effective strategies in mental health care. It would help preventing exposing patients to treatments that do not work and help developing a more personalized approach to treatment assignment (US Food and Drug Administration, 2013).

In an earlier paper (Knapen, Hutsebaut, van Diemen & Beekman, 2020), we introduced the potential value of the concept of epistemic trust (ET) as a measurable predictor or 'psychomarker' of treatment outcome. The concept of ET is defined by Fonagy and Allison (2014) as "the individual's trust that new knowledge from another person is authentic, trustworthy, generalizable and relevant to the self" (p. 373). They describe ET as an adaptation evolved to be able to receive social information from caregivers. It is closely related to the development of social cognition, allowing a child to assess the intentions of others (Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy, et al., 2017b). ET is associated with safe attachment. Aversive childhood experiences are thought to dispose an individual to become more mistrustful about other people's intentions (Fonagy & Allison, 2014; Fonagy, et al., 2015; Fonagy, et al., 2017b). Once established, epistemic (mis)trust may become a rather stable personality feature or disposition. ET predicts to what extend someone will accept social information from others, and therefore also determines someone's capability to be able to learn from therapy. ET could accordingly act as a psychomarker and predict the outcome of psychosocial interventions. This may not be limited to mental health treatment, but to any intervention that depends on trust in others.

In order to be able to measure ET as a potential psychomarker, it is necessary to render it accessible for assessment. Previous efforts to measure ET used experimental procedures to assess ET, conceptualized as an ability. Both Egyed and Corriveau studied ET through investigating how new information is processed by toddlers which makes it not directly applicable to adults (Egyed, Király, & Gergely 2013; Corriveau et al., 2009). Schröder-Pfeiffer and colleagues published a research protocol to study ET in adults in conditions of social stress in a provocative laboratory condition (Schröder-Pfeifer, Talia, Volkert & Taubner 2018. However, it is debatable if a sufficient context

can be simulated in a laboratory situation. Furthermore, this experiment demands considerable time from both patients as therapists and are therefore less clinically applicable.

A more clinically feasible way to assess ET would be to rely upon patient's self-report, by designing a questionnaire that represents clinical features of ET. However, ET is still a relatively new, theoretical and abstract concept and the exact clinical features of ET are not defined in a way that makes them easily accessible for self-report. Hence, first consensus is needed on the definition and clinical features of ET to be able to measure it. We consequently conducted a Delphi study to reach consensus on the definition of epistemic trust and its characteristics.

Concurrently other centres have worked on a self-report questionnaire to measure ET (Campbell, Tanzer, Saunders, Booker, Allison, Li, ... & Fonagy, 2021), which led to the Epistemic Trust, Mistrust and Credulity Questionnaire (ETMCQ), however this questionnaire was not based on expert consensus on the definition of the clinical features of ET.

In this paper we define epistemic trust by describing its core domains based on consensus of expert opinion on the concept.

METHODS

Study Design

The Delphi method was used to survey expert opinion and gain systematic consensus on the definition and clinical features of Epistemic Trust (ET) and Epistemic Mistrust (EM). The Delphi method is a consensus-building technique using expert opinion to formulate a shared framework for understanding a topic or theoretical concept with limited empirical support. (Boulkedid, Abdoul, Loustau, Sibony, & Alberti, 2011; Langlands, Jorm, Kelly, & Kitchener, 2007; Linstone & Turoff, 1975; Powell, 2003). The Delphi method has been proven to be especially useful to address topics involving a lack of empirical data (Delbecq, Van de Ven, & Gustafson, 1975; Powell, 2003; Wollersheim et al., 2009), which makes it particularly suitable to obtain more substantiation to the still new and relatively unexplored concept of ET. The current

Delphi study consisted of three rounds which were presented to the experts via an online survey tool.

Procedure

A provisional definition of ET was proposed by the authors, based upon the available literature. Experts were asked to indicate to what degree they felt that each section was valuable as part of the definition of ET and were stimulated to give feedback in terms of additions and rephrasing of the sections. Subsequently, revised sections were presented again for reconsideration, even when consensus was already reached.

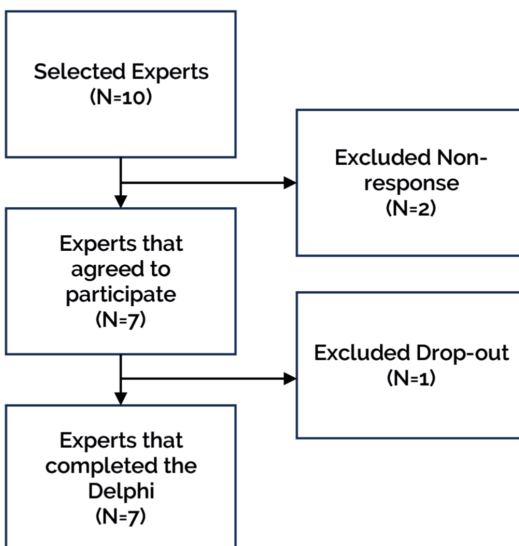

Figure 1 Flowchart of participants in the expert panel.

Selection of experts

Professor Peter Fonagy (P.F.) was asked to support the process of the selection of experts, as he is one of the founders of the theory on ET. The Delphi experts were all clinically and/or scientifically active in the field of personality disorders, mentalization and ET. Selection criteria were drawn up based on criteria from other Delphi studies (Legra, Verhey, & Van Alphen, 2017; Van Alphen et al., 2012). A total of seven experts completed all three Delphi rounds.

Table 1 Characteristics of the Delphi experts (N = 7)

Female gender, %	28.6
Age, mean number of years (SD, range)	53.6 (13.9, 39-73)
Country of residence, %	
UK	42.9
US	42.9
Switzerland	14.3
Current profession, %[1]	
Psychiatrist	28.6
Psychologist	57.1
Researcher	28.6
Professional experience, mean number of years (SD, range)	25.6 (15.8, 5-45)

[1] Multiple answers possible

SD = standard deviation

Data analysis

Data were analysed using mean, standard deviation and median formulas to calculate consensus for each section of the definition. The average score served as a measure of the level of agreement (Alphen et al. 2012; Sharkey & Sharples, 2001). Agreement was reached when at least two-thirds of the respondents (≥67%) "agreed" or "fully agreed" on a 6-point Likert scale.

Definition

To be able to define the more stable clinical features of ET, we choose to specifically focus on a trait-like definition of ET as an adaptive predisposition characterized by a tendency to perceive, think, feel and behave in a certain way in specific situations. The definition therefore was formulated in accordance with the characteristics of a personality trait, as described in the Diagnostic and statistical manual of mental disorders, Fifth edition (DSM-5, American Psychiatric Association, 2013).

RESULTS

In the first round, consensus was reached on six of the seven sections of the definition of ET, meaning that on these sections, more than 66.6% of the experts scored a '5' or '6', indicating medium and strong agreement on the inclusion of the fragment as part of the definition of ET. Total agreement rates ranged from 43% to 86%. In addition,

substantial feedback was given both textually and on the content of the definition. In table 2, the values marked with an asterisk (*) met the criterion of ≥ 66.6% agreement.

Table 2 Results for the agreement of the following sections as part of the definition of epistemic trust/mistrust in round 1 (N=7)

Definition Epistemic Trust[1]	Range	Median	Mean	SD	Distributions of ratings (%)[2]		
					1-2	3-4	5-6
1. General Definition	3-6	6	5.3	1.11	-	14.3	85.7*
2. Expression Epistemic Trust	3-6	5	4.9	1.07	-	28.6	71.4*
3. Continuum	4-6	5	5.0	0.82	-	28.6	71.4*
4. Expression Epistemic Mistrust	2-6	6	5.0	1.53	14.3	14.3	71.4*
5. Context	4-6	5	5.3	0.76	-	14.3	85.7*
6. Ontogenetic	3-6	3	4.1	1.46	-	57.1	42.9
7. Effect Epistemic Trust/Mistrust	4-6	5	5.0	0.82	-	28.6	71.4*

[1] For full definition, see Appendix A.

[2] Distributions of ratings (%) of the tertiles 1-2, 3-4 and 5-6 along the 6-point rating-scale.

In response to the feedback the experts provided, several sections were revised, and suggested additions were taken into account (see Appendix A&B). The section on ontogenetic characteristics of ET met low agreement (42.9%) and was deleted from the definition. Although consensus was reached for all other sections, five of the remaining six sections were again presented to the experts in the second round, since considerable textual revisions were made. This resulted again in sufficient consensus on all these sections, where agreement was higher (sections 1 and 2) or equal (sections 3, 4 and 7) to the first round, as can be seen in table 3.

Table 3 Results for the agreement of the following sections as part of the definition of epistemic trust/mistrust in round 2 (N=7)

Definition Epistemic Trust[1]	Range	Median	Mean	SD	Distributions of ratings (%)[2]		
					1-2	3-4	5-6
1. General Definition	5-6	5	5.4	0.53	-	-	100*
2. Expression Epistemic Trust	3-6	5	5.1	1.07	-	14.3	85.7*
3. Continuum	3-6	5	5.0	1.15	-	28.6	71.4*
4. Expression Epistemic Mistrust	3-6	5	5.0	1.15	-	28.6	71.4*
7. Effect Epistemic Trust/Mistrust	4-6	5	5.1	0.90	-	28.6	71.4*

[1] For full definition, see Appendix B.

[2] Distributions of ratings (%) of the tertiles 1-2, 3-4 and 5-6 along the 6-point rating-scale.

In the second round one of the experts drew our attention to a possible ambiguity of the original definition. Since this feedback related to relevant conceptual aspects of the definition, we decided to carry out a small adjustment to the original definition and conduct an additional third round where 85,7% of the experts agreed with the proposed refinement of one aspect of the definition.

DISCUSSION

The theory of epistemic trust (ET) may have the potential to predict outcome of (social) interventions, but there is still very little empirical evidence for this theory. In order to make the concept of ET accessible to a clinical assessment, consensus is needed about its definition and clinical features. We therefore conducted a Delphi study to gain consensus on the definition of ET. To our knowledge this was the first Delphi study focusing on epistemic trust and mistrust. An international panel of experts on the subject was asked to participate and ultimately consensus was yielded on six of the seven topics concerning ET or epistemic mistrust (EM). The response rate was high and there was a high level of agreement across experts, demonstrating a strong consensus between experts on the definition and clinical features of epistemic trust and mistrust and its significance to the understanding of personality disorders.

We choose to conduct an additional third round because of a relevant conceptual discussion about ET as a stable personality trait. A conceptually similar discussion may be seen in attachment literature, where there has been a paradigm shift from attachment as a relatively stable personality trait towards a more dynamic understanding of attachment (Kobac & Bosmans 2018). Although attachment style may be largely stable and as such predictive of the actual relational style, specific attachment states may still be changeable and (partly) also depend on the specific attachment person involved in the dyad. We believe ET might be conceptually similar: although ET has features that are rather stable over time, the emergence of these features also depends on the actual relational context within a specific (therapeutic) encounter, determining whether trust is evoked or not. In consideration of this, we choose to refine our original definition by defining ET as a trait-like disposition.

Limitations of this study were a limited number of experts (7), and all experts had backgrounds in attachment and mentalizing theory. Other frames of reference in background were not represented. Because of practical issues we chose for an online survey program, which may have sacrificed an opportunity for more active and personal engagement in this effort. Still the Delphi methodology offers a practical and cost-effective approach to this problem. Delphi research relies on level III evidence, though it is recognized as an excellent starting point for further scientific inquiry (Wollersheim et al., 2009).
The purpose of this study was to reach consensus on the definition of ET in order to allow the design of a tool to measure ET. This tool could be used as a psychomarker to predict who may benefit from psychosocial interventions and who may need adaptations to the treatment, e.g. selecting highly specialized treatments, which take into account epistemic hypervigilance from the start. The potential predictive value of ET may not only be limited to mental health treatment, but to any intervention that depends on trust in others. We will therefore conduct a subsequent Delphi study on the design of a questionnaire to be able to measure ET at the start of any treatment.
In a subsequent Delphi study, we will focus on the design of a questionnaire to be able to measure ET at the start of any treatment.

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4

Chapter 4

The development and psychometric evaluation of the Questionnaire Epistemic Trust (QET): a self-report assessment of epistemic trust

Knapen, S., Swildens, W. E., Mensink, W., Hoogendoorn, A., Hutsebaut, J., & Beekman, A. T. (2023). Clinical Psychology & Psychotherapy.

ABSTRACT

Epistemic Trust (ET) refers to the predisposition to trust information as authentic, trustworthy, and relevant to the self. Epistemic distrust – resulting from early adversity – may interfere with openness to social learning within the therapeutic encounter, reducing the ability to benefit from treatment. The self-report Questionnaire Epistemic Trust (QET) is a newly developed instrument that aims to assess ET. This study presents the first results on the psychometric properties of the QET in both a community and a clinical sample. Our findings indicate that the QET is composed of four meaningful subscales with good to excellent internal consistency. The QET shows relevant associations with related constructs like personality functioning, symptom distress and quality of life. QET-scores clearly distinguish between a clinical and community sample and are associated with the quality of therapeutic alliance. The QET provides a promising, brief and user-friendly instrument that could be used for a range of clinical and research purposes. Future studies with larger samples are needed to strengthen construct validity and to investigate the value of the QET to predict differential treatment response or to study mechanisms of change.

INTRODUCTION

Epistemic trust (ET) refers to the developmental capacity to accept and trust information conveyed by another person as authentic, trustworthy, generalizable, and relevant to the self (Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy et al., 2017b). ET is believed to arise from safe attachment relationships and fostered by the capacity to reflect on metal states, i.e. mentalizing. While a healthy development of ET may underpin resilience as it enables an individual to accept and integrate relevant perspectives from others to overcome life challenges (Fonagy et al., 2017a), frequent adverse childhood experiences may dispose an individual to adopt a hypervigilant position towards information from others secluding a person from potentially helpful resources, resulting in high levels of Epistemic Mistrust (EM) (Campbell et al., 2021; Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy et al., 2017a, 2017b). EM and has been conceived of as a transdiagnostic risk factor for developing psychopathology (Fonagy et al., 2015; Luyten et al., 2020). Although EM has been formulated as an essentially transdiagnostic feature, a more intrinsic relationship between EM and the development of personality disorders (PDs) was also assumed (Fonagy & Allison, 2014; Fonagy et al., 2015), most notably with borderline personality disorder.

In a previous, conceptual paper, we formulated ET/EM as the final pathway through which aversive childhood experiences may affect treatment prognosis (Knapen et al., 2020). Indeed, many severely traumatized individuals suffer from interpersonal impairments, that may be associated with dysfunctional relationships, including the therapeutic alliance. EM may interfere with a patient's openness to learn and to accept new perspectives within the therapeutic encounter, directly reducing a patient's ability to benefit from this relationship. Therefore, ET/EM may capture a specific personality-related feature closely associated with a patient's general tendency to trust information from others, thereby impacting the potential effects of psychotherapy. Assessment of this general disposition could enable to identify patients for whom engaging in a productive therapeutic relationship may be impaired, reducing their ability to benefit from 'regular' treatment that does not address this feature sufficiently.

Early efforts to assess ET/EM typically used experimental procedures to study how new information is processed and valued by toddlers (Corriveau et al., 2009; Egyed et al., 2013). A similar approach has also been described for adults (Schroder-Pfeifer et al.,

2018). This research protocol uses provocative lab procedures to induce social stress in order to study ET/EM. Such an experimental approach is not feasibly used in clinical practice. Assessing ET/EM in clinical practice would benefit if a brief, user friendly self-report instrument was available. While no such questionnaire was available at the start of the current study, recently the Epistemic Trust, Mistrust and Credulity Questionnaire (ETMCQ) was developed and tested in two community samples (Campbell et al., 2021). The ETMCQ is an 18 item self-report questionnaire with a three-factor structure, interpreted by the authors as Trust, Mistrust and Credulity. This factor structure was recently replicated in an Italian study (Liotti et al., 2023), however also showing some relevant differences, according to the authors due to linguistic and cultural factors. A limitation of both studies is that they were conducted in community samples only, whereas the conceptual model of ET/EM has been developed mainly to address susceptibility to psychopathology in general, and to personality pathology in particular.

In the construction of our measure, we followed a different procedure which will be described in more detail in the Method Section. Briefly summarized, we didn't follow a theory-driven approach to generate items, but a bottom-up expert-based approach focusing on defining the clinical features of ET/EM (Knapen et al., 2022). Finally, we chose to include a clinical sample of patients with severe personality disorders to study the clinical features and correlates of ET/EM in the patient groups for whom these concepts (especially epistemic mistrust) were formulated.

This study presents the preliminary results on the psychometric properties of the QET. We will describe the procedure that was followed to generate items and to reduce the initial set of 49 items to a clinically feasible, brief instrument including 24 items. In addition, we will present preliminary data on factor structure, reliability and construct validity, as obtained in both a community sample and a clinical sample consisting of patients with severe and complex personality disorders. Regarding the factor structure we had no clear a priori hypothesis on the number of factors, although we assumed it reasonable to expect at least two factors related to a general disposition towards trust/mistrust and a specific expectancy regarding help in a professional context. Regarding discriminant validity, we will compare levels of ET/EM between the community and clinical sample, expecting clearly higher levels of EM in the clinical sample. Regarding construct validity we will investigate associations between the QET

and measures for severity of personality and general psychopathology, quality of working alliance, and quality of life. These measures were based on the theoretical model underpinning the construct of ET and on our specific interest in ET/EM as a correlate of (problems in) the therapeutic relationship. More specifically, we expected substantial positive associations between ET on the one hand and adaptive personality functioning and quality of life, while we expected negative associations between ET and general psychopathology. Regarding the therapeutic alliance, we expected ET to be positively associated with a positive quality of the therapeutic alliance, based upon the assumption that ET underpins a positively experienced working alliance that may be beneficial for treatment outcomes.

METHOD

Participants and procedure

We recruited two samples between June 2020 and March 2022. The first sample was recruited at the AMBIT (Adaptive Mentalization Based Integrative Treatment) unit, an outpatient unit for patients with severe and complex personality disorders in a Dutch Mental Health Institution. All patients receiving treatment in the AMBIT unit are approached yearly by an institutional research team for collecting routine outcome data on their progress in treatment (de Beurs et al., 2011). The instruments used for the current study were integrated within this procedure. Hereto, patients gave informed consent to complete an extra online package of questionnaires, as detailed below. 454 Patients of the AMBIT teams were informed about the study of whom 164 (36%) agreed to participate, 107 of them (65%) also completed all questionnaires. All patients receiving treatment at the AMBIT unit were approached for participation. Not being able to read and understand Dutch sufficiently was the only exclusion criterion.

The second sample was recruited in the community. The researchers approached, with the assistance of students in clinical psychology, a convenience sample of individuals. Social media were used to spread the questionnaires that were administered as an online survey using the software Qualtrics (Qualtrics, 2019). 130 Individuals signed informed consent and were included.

Measures

Data from the Questionnaire Epistemic Trust (QET), the Severity Indices of Personality Problems SIPP-SF and the Work Alliance Inventory (WAI) were collected in both the clinical and the community sample. The Health of the Nations Outcome Scales (HoNOS) and Manchester Quality of Life Short Assessment (MANSA) were gathered in the context of the yearly routine outcome monitoring for the clinical sample only.

Questionnaire Epistemic Trust

The Questionnaire Epistemic Trust (QET) was designed for the purpose of this study to assess the main clinical features of epistemic trust. Construction of the questionnaire followed a bottom-up procedure using a Delphi-procedure. The procedure that was used to agree upon the definition and clinical features of the concept of ET has been described in detail elsewhere (Knapen et al., 2022). Briefly summarized, an international group of experts was approached to define the construct of ET/EM. After agreement upon the definition and clinical features (Knapen et al., 2022), three authors of this paper (SK, JH and AB) generated items reflecting the different elements of the definition. These items were presented for feedback to the same group of respondents, again following a Delphi-procedure. Experts were asked to indicate to what degree they agreed that each item was valuable for assessing ET/EM. If disagreeing, experts were stimulated to provide feedback in terms of additions and/or a suggested rephrasing of the proposed items. In addition, we also stimulated experts to present new items themselves in order to fully capture the concepts. Items were presented in subsequent feedback rounds, until consensus was reached for all items. This procedure resulted in an initial version of the QET including 49 items. As the original items were formulated in English, translation into Dutch was done through a forward backward translation method (Wild et al., 2005). In addition, we presented the items to a panel of experts by experience and pilot tested the questionnaire with patients to check for comprehensibility and readability of items.

The original version of the QET thus consisted of 49 items (Knapen et al., 2020). Items concerned statements about trust and mistrust and were to be rated on a 5-point Likert scale varying from 1 (totally agree) to 5 (totally disagree). For example, "I am easily suspicious that information from most people cannot be trusted". After reverse scoring of negatively formulated statements higher scores imply higher epistemic trust

(theoretical range of total score for all items lies between 49-245). However, as one of the primary aims was to develop a brief and user-friendly instrument, we reduced the number of items (see further), to reach a final version of 24 items (range 24-120), which was used for all further analyses to establish psychometric properties.

Severity Indices of Personality Problems - Short Form (SIPP-SF)

The SIPP-SF (Verheul et al., 2008), a short version of the SIPP-118, was used to assess adaptive personality functioning. The SIPP-SF is a 60-item self-report questionnaire that focuses on five core domains of adaptive personality functioning: Self-Control, Identity Integration, Relational Capacities, Responsibility and Social Concordance. All items are answered on a 4-point Likert scale. Higher scores imply better adaptive functioning. The SIPP-SF has shown good reliability and validity in previous studies (Weekers et al., 2019). In the current study the Cronbach's α of the five subscales in the clinical and the community sample ranged from .89 to .94.

Working Alliance Inventory 12 item Short Form (WAI-12)

The Dutch version of the WAI-12 (Hatcher & Gillaspy, 2006; Stinckens et al., 2009) was used in the yearly routine outcome monitoring of the participating teams to measure the quality of the therapeutic alliance. The WAI-12 consists of three subscales referring to a contact/bond, task and goal component. The WAI-12 can be used from patient and therapist perspective; in this study, we used the patient version. Patients rate items on a 5-point Likert scale anchored at each end with 'rarely or never' (1) and 'always' (5). A higher score indicates a better therapeutic alliance. The Dutch version of the WAI-12 and the subscales have shown good reliability (α's ranging from .70 to .80) and validity (Stinckens et al., 2009). In the current study α for the total score was .92 (clinical sample)

HoNOS

The Dutch version of the Health of the Nation Outcome Scales (HoNOS) (Mulder et al., 2004) was used to assess the general level of psychopathology. The HoNOS is a frequently used instrument in patients with severe mental illness and was included in the yearly routine outcome measurement of the institution. It is a 12-item clinician-rated measure, developed to assess health and social care outcomes in specialist mental health care services for adults (Wing et al., 1998). Item scores vary from 0 = no

impairments to 4 = very severe impairments. Higher total scores on the HONOS are indicative for more limitations in psychosocial functioning and worse (mental) health. The psychometric properties of the HoNOS, including the Dutch version, are tested as sufficient. The internal consistency for the HoNOS varies in international studies from α = .59 to .89 (Eagar et al., 2005; Pirkis et al., 2005) indicating moderate to high internal consistency and low item redundancy. Internal consistency of the Dutch version was good with α= .70 (20) and also in our clinical sample, internal consistency was good (α = .74).

MANSA

The Manchester Short Assessment of quality of life (Dutch version) (Priebe et al., 1998) is a self-report measure to assess quality of life in people with mental health problems. 12 Items rating several life domains (for instance mental health, daily activities, family relations) are rated on a seven-point scale ranging from 1 (very much dissatisfied) to 7 (very much satisfied). Summary scores range from 12 to 84, with higher scores indicating better quality of life. Previous studies of the Dutch version of the MANSA showed psychometric properties, including a moderate to good internal consistency (α= .74) (Priebe et al., 1998). In our current clinical sample, we found α=.82.

Additional information

Additional descriptive data were collected. For the patient group we used the standard information gathered as part of the routine outcome monitoring including sociodemographic information (gender, age, education level) and information on living and work situation. For the community sample, only sociodemographic information was collected.

Sample size

Power calculation for the factor analysis was based on the recommendation of Anthoine et al (Anthoine et al., 2014; Mundfrom et al., 2005) for a subject-to-item ratio of > 2 to maximum 5. For reasons of feasibility a minimum of 100 subjects per group was chosen (subject-to-item ratio of 2).

Data analysis

Since we followed a bottom-up, less theory-driven, but expert based procedure, focusing on the clinical features of ET and epistemic mistrust, we had no a priori hypothesis on factor structure and therefore conducted a Principal Component Analysis (PCA) to determine the number and type of domains in the QET in the clinical sample. The requirements for Principal Component Analysis were tested using the Kaiser-Meyer-Olkin measure of Sampling Adequacy and Bartlett's test of sphericity. Because we expected that the underlying components would be related, an oblique rotation was chosen for the PCA. The number of factors was determined by using the rule with eigenvalue >1 (Kaiser, 1960) and finally decided by evaluation of the scree plot and item loadings in combination with clinical expertise.

As our primary aim was to design a brief and easy-to-use instrument that may be useful for clinical and research purposes, we first aimed to further reduce the number of items. Therefore, after first establishing the factor structure for the initial 49- item version, we reduced the total number of items by selecting six items per factor based upon the analyses done in the clinical sample. To be included, items first had to have a factor loading of at least > .40 on one factor (Peterson, 2000). Second, further selection was based on Cronbach's α if item deleted procedure (De Vet et al., 2011). Finally, the resulting items were independently assessed on content by two authors (SK and JH). Ultimately, four items were removed based on this content review. To be fully transparent about the procedure we followed, we report in detail in the Addendum which items were removed in this last step and why they were removed.

Following the PCA in the clinical sample, we conducted a Confirmatory Factor Analysis (CFA) in the community sample to validate the factor structure by evaluating fit indices and to assess measurement invariance across the clinical and community sample. CFA was applied to the data of the community sample in the following way: a four-factor model was fitted to the four groups of six items, assuming uncorrelated errors in the first model and allowing correlated error between the items within a factor in the second model. The following fit indices were calculated: the root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the Standardized Root Mean Square Residual (SRMR). We will interpret that RMSEA and SRMR values smaller than .08, and CFI and TLI values larger than .9 indicate an acceptable fit, as suggested

by Hu and Bentler (1999). Next to the model that assumes uncorrelated residuals, a model with correlated residual within factors was estimated, in order to evaluate the improved model fit. Measurement invariance was evaluated by use of multiple group structural equation modeling and the use of a likelihood ratio test comparing the model without any restrictions to the model that restricts the factor loadings to be equal across the two groups: not rejecting the invariant loadings model suggests measurement invariance.
The reliability of the 24-item QET was determined by computing internal consistency (Cronbach's Alpha).

Subsequently, to find evidence for construct validity we determined the convergent and discriminant validity using the QET and the SIPP-SF, the WAI-12 and the HoNOS and the MANSA. We analyzed the associations between the QET and these instruments by Pearson's correlation tests for continuous variables. In additional regression analyses, the relations between measures were extra controlled for differences between patients and community sample in age and educational level (low versus moderate/high).

Finally, as an extra analysis of the construct validity, we studied if patients had lower levels of epistemic trust measured with the QET and if patients also had worse functioning measured with the SIPP-SF compared to the community sample. Scorings of both groups on QET and on SIPP-SF were compared with independent students t-tests. Also, these tests were supplemented with additional regression analyses controlling for differences in age and educational level between the patient group and the community sample.

RESULTS

Sample characteristics

Table 1 presents the sociodemographic and clinical characteristics of both samples. The patient group was on average younger than the community sample: 41.4 years (SD=11.9) versus 45.4 years (SD=14.7); $p<.001$); and had a lower level of education (20.4% versus 5.4% with a low education level; $p<.001$) (OECD, 2017). For the patient group. extra information was available. Most of the patients did not have a partner or work,

were unmarried and living independently, while one third received supported living services.

Table 1 Participants characteristics of the clinical and the community sample

Characteristics	Clinical Sample n=107	Community Sample n=130	Test results[1]
Gender, % (n)			
-male	19.6% (21)	24.6% (32)	χ^2=0.841, p=.359
-female	80.4% (86)	75.4% (98)	
Age, mean (SD)	41.39 (11.92)	45.39 (14.71)	t(235)=2.27, p=.024
Level of education[2], % (n)			
-low	20.4% (21)	5.4% (7)	χ^2=62.34, p<.001
-medium	39.8% (41)	90.0% (117)	
-high	39.8% (41)	4.6% (6)	
Dutch native, % (n)			
-yes	92.4% (97)	91.5% (119)	χ^2=0.06 p=.814
-no	7.6% (8)	8.5% (11)	
Partner relation, % (n)			
-yes	35.5 (38)		
-no	64.5 (69)		
Marital state, % (n)			
-not married	71.9% (77)		
-married/cohabitation contract	15.0% (16)		
-divorced/widow(er)	13.1% (14)		
Paid work, % (n)			
-no	85.8% (91)		
-yes	14.2% (15)		
Supported living, % (n)			
-yes	32.4% (33)		
-no	67.6% (69)		
Living situation, % (n)			
-independent alone	55.1% (59)		
-independent with others	41.1% (44)		
-mental health institution	2.8% (3)		
-other	0.9% (1)		
General functioning, HoNOS total, mean (SD)	11.88 (5.74)		
Quality of life, MANSA total, mean (SD)	49.20 (12.80)		

** Missings: level of education: 4; Dutch native yes/no: 2; paid work: 1; supported living: 5; HoNOS: 3; MANSA: 5.

p = two sided

OECD, European Union, UNESCO Institute for Statistics. ISCED Operational Manual: Guidelines for Classifying National Education Programmes and Related Qualifications. OECD Publishing; 2015. Low= ISCED level 0 – 2; medium= ISCED level 3–5; high= ISCED level 6 – 8.

The patients' average total HoNOS-score is 11.88 (SD=5.74) comparable with scores for SMI found by Mulder et al. in the Netherlands (Mulder et al., 2004). The HoNOS score of the AMBIT patients participating in the study did not differ much from the mean score in the total population of AMBIT patients during the inclusion period. The total mean score for quality of live was 49.20 (SD=12.80) which is low compared to median scores of 56-58 (SD=9.34) for patients with SMI before and after entering flexible assertive community treatment teams in the Netherlands (Nugter et al., 2016).

Factor structure

The factor structure of the initial 49-item version of the QET by principal component analysis performed in the clinical sample resulted in a satisfactory KMO value of 0.76 and Bartlett's sphericity value of <0.001 indicating factorability of the items (details are presented in the addendum table A1). The scree plot used to determine the number of factors to keep in the component analyses suggested a four-factor solution (Cattell, 1966). The original 49 factors (Addendum table 2 and 3 for clinical and community sample sample) were rotated according to the Oblimin procedure. The total percentage of variance explained by the four factors was 50.3%.

Based upon the content of the items loading on each of the four factors, we interpreted factor 1 as Hypervigilance: the tendency to be overly vigilant with regard to the intentions of the other and thus the reliability of the knowledge and information of the other; factor 2 as Curiosity/openness: the tendency to be genuinely curious about the opinions of others; factor 3 as Expectation of help: the experience or expectation that one can benefit from the knowledge/information/advice of others and finally factor 4 as Openness to help: the willingness to be open to the knowledge of the other in a counseling relationship.

Subsequently, we followed the procedures to further shorten the questionnaire (reliability analyses and independent scrutiny of content by the authors) to a 24-item version of the QET (presented in table 2). The considerations for the item selection are included in the addendum (with Tables A2 and A3).

Table 2 Principal component analysis result; Rotation Oblimin with Kaiser Normalisation, 25 iterations. Selection of the 24 definite factors in order of size. Clinical sample (n=107)

	Factor 1 Hyper-vigilance	Factor 2 Curiosity/ Openess	Factor 3 Expectation of Help	Factor 4 Openness to Help
I easily doubt other people's intentions when they give me advice. (2 R)	.762			
I feel cautious in accepting information from others. (12 R)	.746			
I am easily suspicious that information from most people cannot be trusted. (1 R)	.711			
I tend to be cautious when people try to teach me something. (3 R)	.696			
I have to be cautious to protect myself from misleading information. (7 R)	.658			
I am easily suspicious about information from my therapist. (23 R)	.662			
I am generally curious to tips or advice from my therapist. (44)		.806		
I am interested in what my therapist can teach me. (45)		.765		
I feel open to accept information from my therapist. (43)		.697		
I feel open to accepting information from others. (14)		.650		
I ask questions when I don't understand something. (19)		.612		
I am generally curious about things other people know about. (15)		.566		
My therapist helps me consider ideas that would never have occurred to me on my own. (32)			.733	

Item		
Advice or tips from my therapist usually do not work for me. (22)	.713	
I generally think that what my therapist is communicating to me is useless for me. (25)	.712	
My therapist provides me with valuable information and tips. (36)	.709	
I expect that the advice from this therapist will help me. (28)	.707	
Tips or advice that my therapist gives me might help for others, but not for me. (35 R)	.680	
I quickly doubt information from my therapist. (26 R)		.823
I am afraid to accept what my therapist advises me to do. (40 R)		.801
I feel cautious about accepting information from my therapist. (39 R)		.762
I am highly selective in what information from my therapist I can trust. (48 R)		.761
I feel cautious when my therapist tries to teach me something. (42 R)		.755
In treatment, I tend to be cautious to protect myself from misleading information. (24 R)		.718

R = reverse for scoring. Between the brackets the original item number of the first 49 QET version.

Finally, we carried out a confirmatory factor analysis (CFA) to assess the structural validity and measurement invariance of the 24-item QET in the community sample. The results of the CFA (table 3) indicated an acceptable model fit (RMSEA = .095, CFI = .82 and SRMR = .103 for the standard model and RMSEA = .077, CFI = .90 and SRMR = .076 for a model with correlated residuals). Measurement invariance across the clinical and the community sample was supported: chi-square (20) = 26.16, p-value = 0.1606, not rejecting the invariant loadings model.

Table 3 Fit indices from confirmatory factor analyses (CFA) in the community sample

Model	CFI	TLI	SRMR	RMSEA (95% CI)
4 factor, 24 items	.82	.80	.103	.095 (.084, .106)
4 factor, 24 items, CRs	.90	.87	.076	.077 (.064, .090)

CRs = Correlated residuals; CFI = Comparative Fit Index; TLI + Tucker-Lewis Index, SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation

Internal consistency

The Cronbach's alpha for the total 24-item scale was excellent with α= .91 in both the clinical and community sample and also good to excellent for all four domains (see Table 4 clinical sample and online Table A4 community sample).

Correlations between subscales for the clinical sample varied between r= 0.04 and r= 0.48. This means that, although the subscales are related, their maximum shared variance is less than 25%. Correlations for the community sample varied between .26 and .66 with a maximum shared variance of 33% (shared variance A = 0.66^2 = 0.44 table A4).

Table 4 Reliability, correlations between scales and average scores (SD) of the QET scales for the clinical sample (n=107)

	Hypervigilance	Curiosity/ openness	Expectation of help	Openness to help
Hypervigilance	(.88)	.311**	.037	.484**
Expectation of help		(.80)	.397**	.419**
Curiosity/openness			(.87)	.453**
Openness to help				(.90)
QET, subscales and total score	18.85 (SD=5.21)	23.72 (SD=3.31)	22.56 (SD=4.47)	21.44 (SD=5.63)

*p<.05 **p<.01 Reliability of scales (Cronbach's alpha) is shown between the brackets

NB: Reliability scores measured in the community sample were comparable (available in addendum, table A4).

Construct validity

The overall pattern of correlations in the clinical sample showed significant associations between the QET and a range of related constructs (table 5). More

precisely, in the clinical sample the QET had moderate to high correlations with the WAI (r=.501, p<.01) and the SIPP-SF scales (ranging from r= .473, p<.01 for self-control to r=.661, p<.01 for identity integration) and significant but relatively lower correlations were found with the HoNOS (r=-.279, p<.05) and the MANSA (r=.272, p<.01). For the community sample the correlations between the total QET score and the SIPP-SF subscales were lower but also significant and varied from r=.266 (p<.01) for Self-control and ,436 (p<.01) for Identity integration (addendum table A5).

Table 5 Pearson correlation between the scales of the QET and the scales of the SIPP-SF, HoNOS and MANSA (clinical sample, n=107)

	QET	Hypervigilance	Curiosity/ openness	Expectation of help	Openness to help
WAI	.501**	-,017	.382**	.723**	.406**
HoNOS	-.279*	-.242*	-.126	-.152	-.249*
MANSA	.272**	.222*	.062	.250*	.211*
SIPP-SF self-control	.473**	.504**	.261**	.283**	.361**
SIPP-SF identity integration	.662**	.618**	.418**	.446**	.524**
SIPP-SF relational capacities	.658**	.622**	.426**	.410**	.532**
SIPP-SF social concordance	.450**	.453**	.317**	.258**	.338**
SIPP-SF responsibility	.494**	.445**	.275**	.344**	.421**

*p<.05 ** p<.01 Due to occasional missing values, sample sizes range from n=100 to n=104 for correlations -Cronbach's Alpha: WAI .925; HoNOS .744; MANSA .828; SIPP-SF .946; SIPP-SF self-control .894; SIPP-SF identity integration .961; SIPP-SF relational capacities .853; SIPP-SF social concordance .875; SIPP-SF responsibility .867.

Table 6 shows mean scores of the QET total score and the subscale scores for both the clinical and community sample, together with test results from comparing these means. The scores in the clinical sample varied between 18.85 (SD=5.21) for

Hypervigilance, 21.44 (SD=5.63) for Openness to help, 22.56 (SD=4.47) for Curiosity/openness and 23.72 (SD=3.31) for the subscale Expectation of help. Both the total and all subscale scores were, as presented in table 6, statistically significantly lower in the clinical sample compared to the community sample showing reduced epistemic trust. The difference is most pronounced for Hypervigilance: 18.85 SD=5.21 for the clinical sample and 24.65 (SD=3.39) for the community sample (t(235)= - 10.28; p<.001). These results were in line with the SIPP-SF scores that showed more personality impairments in the patient as compared to the community sample.

Table 6 Difference between the patient and the community sample on the QET

	Patients	Community Sample	Difference				
	N=107 M (SD)	N=130 M (SD)	T	DF	p	95% CI	d
QET[1]	86.55 (13.63)	99.89 (10.43)	8.516	234	p<.001	16.435 - 10.259	11.98
Hypervigilance[1]	18.85 (5.21)	24.65 (3.39)	10.28	235	p<.001	7.647 - 5.317	4.530
Experience/ expectation of help[1]	23.74 (3.31)	25.32 (3.48)	3.58	235	p<.001	2.471 - 0.717	3.410
Curiosity /openness[1]	22.56 (4.47)	24.43 (3.19)	3.743	235	p<.001	2.854 - 0.885	3.827
Openness to help[1]	21.44 (5.63)	25.32 (3.60)	6.40	235	p<.001	5.065 - 2.683	4.632
SIPP-SF[2]	N=103	N=80					
SIPP-SF[2]	159.23 (28.67)	214.60 (16.30)	15.43	183	p<.001	62.442–48.284	24.07
Self-control[2]	33.88 (8.38)	44.23 (4.02)	10.35	183	p<.001	12.363–8.344	8.63
Identity integration[2]	25.04 (8.57)	43.30 (5.05)	18.25	183	p<.001	20.384–16.118	7.25
responsability[2]	36.25 (7.11)	43.85 (3.34)	8.81	183	p<.001	9.298–5.879	5.78
Relational capacities/skills[2]	27.42 (7.37)	40.95 (6.02)	13.31	183	p<.001	15.533–11.524	6.81
Social concordance	36.63 (7.59)	42.19 (4.26)	5.941	183	p<.001	7.501–3.761	6.36

*p<.05   ** p<.0

[1] Differences between patients and community sample stay the same for the QET and the subscales Hypervigilance, Curiosity/openness, and Openness to help after control for differences in age and education level (low/moderate versus high). The difference between groups on the subscale experience/expectation of help is after control for education level age no longer significant (figures in addendum table A5).
[2] Differences between patients and community sample stay the same for the SIPP-SF and subdomains stayed significant after control for the difference in age and education between groups.

DISCUSSION

This study aimed to investigate the psychometric properties of the newly designed Questionnaire Epidemic Trust. We started with a 49-item version, constructed through a Delphi procedure including experts in the field. Building on a factor analysis, demonstrating four factors, we reduced the number of items to 24, in order to achieve a brief and easy-to-use instrument that may be useful for clinical and research purposes. The current study presents the first data from both a clinical and a community sample. Initial PCA revealed a four-factor structure in a clinical sample. The results of the CFA done in a community sample indicated acceptable model fit. Our findings further showed good to excellent internal consistency for the total scale and for each of the four subscales. All scales were associated in a clinically meaningful way with a range of conceptually related variables, like severity of personality problems and level of general psychopathology, supporting construct validity of the instrument. Moreover, all scales were also associated with the quality of the working alliance, and they significantly distinguished a clinical sample from a community sample. All these findings are supportive of the QET. We will deepen the discussion by highlighting some findings.

Items were generated bottom-up by experts and were not formulated according to a previously designed theoretical model of potential subcomponents of the construct of ET. We, therefore, did not have a priori hypotheses on the number of factors. However, as we intended to capture the more trait-like disposition to (dis)trust others in general (for the purpose of social learning), as well as the more specific state-like tendency to (mis)trust a potential provider of professional help, we expected to find at least these two clusters of items. Our data suggested a four-factor structure, which we interpreted as 1. Hypervigilance, 2. Curiosity/openness, 3. Expectation of help and 4. Openness to

help. Interestingly, and in line with our expectations, factors 1 and 2 indeed seem to reflect a more general tendency to experience trust in any relationship. On the other hand, factors 3 and 4 seem to be more related to trust in treatment providers, like therapy relationships, reflected in the expectation of help respectively the openness to help. The factors were correlated, but not very strongly, suggesting that trusting professional treatment providers may be different from trusting others in general. These findings may resonate with the observation that some patients find it more difficult to trust their therapist, being an authoritative person, as compared to their peer group members or vice versa (Sokol & Fisher, 2016). Furthermore, the differences between the four factors seem to highlight an additional aspect of the concept of ET. In the literature, ET is described as trust that the other person has information to offer which is relevant to the self and trust in the good intentions of the other to offer information or help (Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy et al., 2017a). The 'trust the source' aspect of ET seems to be especially reflected in the 'Hypervigilant' and 'Expectancy of help' factors (factors 1 and 3). At item level, factor 1 (Hypervigilance) mostly addresses the reliability of the source. Sample items are: "I am easily suspicious that information from most people cannot be trusted' and "I easily doubt people's intentions when they give me advise". Factor 3 on the other hand, which we interpreted as 'Expectation of help', seems to capture more the aspect of 'relevance to the self' in the theoretical concept of ET. Items focus more on openness to information from others and are therefore more connected with accepting information from others as relevant to the self: "I am generally curious to tips or advice from my therapist" or "I am interested in what my therapist can teach me". Interestingly, both factors (1 and 2) showed the highest factor loadings and explained most of the variance (40%), which may indicate that hypervigilance and expectation of help reflect the core of the concept of ET.

To the best of our knowledge, only one other instrument has been designed to assess ET, the ETMCQ, which was not yet available when we started data collection. Campbell and colleagues (Campbell et al., 2021) found a three-factor structure – interpreted as Trust, Mistrust, and Credulity – in line with their a priori theoretical model. Interestingly and despite a seemingly different factor structure, there also seem to be similarities in the factor structure between the QET and the ETMCQ. Indeed, whereas our factors do not directly seem to refer to the three 'epistemic

dispositions' of 'Trust', 'Mistrust', and 'Credulity' from the theory, we think that there is strong conceptual overlap. It seems that our factors 1 and 3, referring to Hypervigilance and Expectation of help, may be most related to the Trust and Mistrust factors in the Campbell study. Indeed, hypervigilance may be conceptually related to a general tendency to mistrust, while the general tendency to expect help may be related to the concept of Trust. Future studies could investigate to what degree our first two factors indeed overlap conceptually with both factors from the ETMCQ. However, Campbell and colleagues also found the factor of credulity in their instrument. They define credulity as a lack of vigilance and discrimination resulting in vulnerability to misinformation and the potential risk of exploitation. This epistemic stance may reflect a certain naiveté, which may be related, to some degree, to our factors of 'openness to help' and 'curiosity', however in the extreme variants of these dimensions. One could imagine that an extreme position of openness to help or extreme levels of curiosity without vigilance, may reflect the sort of epistemic credulity that Campbell and colleagues found in their study. This questions the fact to what degree extreme scores on these two factors may still represent 'adaptiveness' or may reflect naiveté. Further studies should clarify this.

Regarding the construct validity of the QET, our findings showed moderate to high associations between the QET and the subscales of the SIPP-SF. Interestingly, the strongest correlations were found for the SIPP-SF subscales Relational Capacities and Identity Integration. Both have been conceptualized as core components of personality disorders within the Alternative Model for PDs (Oldham, 2015). This may confirm the inherent association between epistemic mistrust and PDs. Mistrust in others results /in problems in interpersonal functioning, which may lead to negative beliefs about oneself through negative experiences with others. Also, being rigid and not open to social learning makes it more difficult to navigate the social world and, in that way, again leads to negative experiences in self-functioning which further deepen negative beliefs about the self. Identity is at the core of personality functioning, and both are strong indicators of the severity of personality pathology (Hopwood et al., 2011). Severity is until now the strongest predictor of outcome in the treatment of personality disorders (Skodol et al., 2011). Associations between the QET and the HoNOS and the MANSA were moderate. Both HoNOS and MANSA reflect severity of malfunctioning and further underpin the relationship between ET and severity of pathology. Since they

do not specifically measure personality or relational functioning, associations are lower than with the SIPP-SF. In their study, Campbell and colleagues found that mistrust and credulity scores were associated with higher scores on the global psychopathology severity index, which is comparable with our results on the HoNOS and the MANSA (Campbell et al., 2021).

Given our interest in designing an instrument that may help to predict treatment response due to interference with openness to a professional treatment relationship, we also included a measure of the working alliance. As expected, we found moderate to high correlations between the QET and the WAI. The QET measures the tendency to be open to the knowledge of others in a counseling or therapeutic relationship and the degree to which the other is trusted in expertise and expected to be helpful, which are all important contributors to the therapeutic relationship (Horvath, 2005). However, the actual alliance may not only be determined by this pre-disposition but also depends on specific patient-therapist dyad related factors, explaining only partial overlap. Indeed, sensitive therapists may overcome this epistemic disposition and trigger momentaneous experiences of ET within a dispositional mistrustful person and build a better alliance. Therefore, both constructs should be distinguished: the working alliance measures the alliance within a concrete therapeutic relationship, whereas ET may have the potential to predict alliance in a future therapeutic relationship. As the working alliance is one of the most investigated common factors related to success in psychotherapy and given the vast evidence for the predictive value of the therapeutic alliance on outcome (Falkenstrom et al., 2014; Fluckiger et al., 2018; Horvath & Symonds, 1991; Sauer et al., 2010), this may further underpin the assumption that the QET may have the potential value to predict outcome.

Finally, the QET was found to be significantly sensitive in measuring differences between the community and a clinical sample. These findings suggest that the QET may be clinically applicable to distinguish between more healthy and pathological personality functioning.

Strengths and limitations

A major limitation of our study is the sample size. Further testing in different and especially larger samples is warranted to confirm the structure and other

psychometric properties of the QET. Another limitation is the lack of validation instruments that are conceptually closely related to our measure. Unfortunately, the Epistemic Trust, Mistrust, and Credulity Questionnaire (ETMCQ) was not yet available when we initiated this study. We believe that future studies should in addition also include aspects like general interpersonal trust (OECD, 2017) or suspiciousness to study conceptual overlap but also discriminant validity of both ET measures.
We also believe that our study has some notable strengths. This study not only presents the first data on an ET measure in a clinical sample, but it also addresses this issue in a very specific, hard-to-reach sample of patients suffering from very severe PDs – a large sample is virtually impossible to achieve in this group of patients. This sample consists of persons who are eminently known for their low epistemic trust. Also, despite the smaller sample size, we want to highlight that we found similar factor structures in both clinical and community samples and that all investigated associations followed the a priori hypotheses.

Clinical use and future research

The QET was designed as an easy-to-use instrument to assess epistemic trust in a range of community and clinical samples, including the hard-to-reach samples for which the construct has been used most often. While further research is still needed, we believe that the QET may have clinical utility in addition to existing instruments. Compared to most personality measures, it seems to capture these aspects of personality that relate closely to the disposition of patients to open up to their therapy/therapists and may therefore be more strongly predictive of the potential alliance problems that may occur. Compared to the instruments designed for assessing working alliance, the QET may enable to predict potential alliance problems prior to the establishment of a therapeutic alliance. A poor score on the QET may therefore indicate that very sensitive and authentic action must be taken within future therapeutic relationships and that it may be better to assign to treatment programs in which reducing epistemic mistrust (and credulity) is the main starting point of the treatment. Future research on the predictive value of the QET will be needed to establish ET as a psychomarker for outcome. Additionally, providing an empirical measure of ET opens ways for new research on the until now largely theoretical concept of ET. In a future study we intend to generate empirical support for the

theoretical assumptions about epistemic trust and childhood adversity, attachment, mentalizing, and personality pathology.

CONCLUSION

These preliminary data on the QET suggest that it is a promising, brief and user-friendly instrument to measure Epistemic Trust in real-world clinical situations. Further studies are needed in larger samples and in different countries and cultures to validate and test the predictive value of the QET on treatment outcome.

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5

Chapter 5

Associations between Epistemic Trust and the severity of Personality Disorder: results from a study comparing patients with personality disorder, anxiety disorder and controls.

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ABSTRACT

It has been argued that maladaptive mental health outcomes related to childhood trauma are mediated by mentalizing incapacity and attachment insecurity. Recently, (a lack of) epistemic trust was introduced to be an additional important mediator of the effects of childhood adversity. It is assumed that early childhood adversity may dispose an individual to adopt a rigid and pervasive hypervigilant position toward information coming from others, resulting in high levels of Epistemic Mistrust which leads to an incapacity to adapt flexibly to the social world. In turn, this is supposed to affect someone's resilience and, in this way, to increase the risk of developing psychopathology. Although the model of ET is essentially transdiagnostic, a more intrinsic relationship between EM and the development of personality disorders (PDs) is assumed. Although the theory of ET and EM is rather novel, it has quickly become widely accepted in the field, despite much empirical evidence. This is the first study investigating the level of ET and associations between ET and PDs among patients with PD, anxiety disorders (Ads), and a community sample. In line with the idea of dimensionality of psychopathology, our results demonstrated more severe impairments in ET in patients as compared to subjects from the community. Our findings on associations between ET and the severity and types of PDs corroborate the theoretically assumed relations between ET and psychopathology and PDs in particular. Future research with larger samples and preferably prospective designs is needed to explore further and substantiate the theoretical assumptions about ET.

INTRODUCTION

There is robust evidence that aversive childhood experiences are a generic etiological factor in the development of mental disorders (M. Li, D'Arcy, & Meng, 2016; McKay et al., 2021; Nanni, Uher, & Danese, 2012). Childhood trauma is associated with earlier onset, greater symptom severity, more comorbidity, a greater risk for suicide, and a poorer response to treatment in many disorders (Scott, McLaughlin, Smith, & Ellis, 2012; Teicher & Samson, 2013). Within Personality Disorders (PD), a history of complex interpersonal trauma is most closely associated with borderline personality disorder (BPD) (Afifi et al., 2011; Battle et al., 2004; Hengartner, Ajdacic-Gross, Rodgers, Muller, & Rossler, 2013; Scott et al., 2012). Several theories have been formulated to explain the pathogenic effects of childhood interpersonal trauma (Luyten, Campbell, Allison, & Fonagy, 2020). Recent studies have supported the hypothesis that maladaptive mental health outcomes related to childhood trauma are mediated by mentalizing incapacity (E. T. Li, Carracher, & Bird, 2020) and attachment insecurity (Muller, Thornback, & Bedi, 2012). It has been argued that in addition to attachment and mentalizing, (a lack of) epistemic trust may also be an important mediator of the effects of childhood adversity (Fonagy & Allison, 2014; Fonagy, Luyten, & Allison, 2015; Fonagy, Luyten, Allison, & Campbell, 2017a, 2017b; Luyten et al., 2020). ET refers to "the individual's trust that new knowledge from another person is authentic, trustworthy, generalizable and relevant to the self" (Fonagy & Allison, 2014 p. 373). According to the model of ET, early negative interpersonal childhood experiences may dispose an individual to adopt a rigid and pervasive hypervigilant position toward information coming from others, resulting in high levels of Epistemic Mistrust (EM) (Fonagy et al., 2015; Fonagy et al., 2017a, 2017b). This generates a rigid stance, closing an individual off from social learning, which makes it more difficult to navigate the social world and, in that way, may lead to negative beliefs about oneself through negative experiences with others and self-functioning. In turn, the model assumes that this incapacity to adapt flexibly to the social world affects someone's resilience and, in this way, increases the risk of developing psychopathology (Fonagy et al., 2015; Luyten et al., 2020). Although the model of ET is essentially transdiagnostic, the authors assume a more intrinsic relationship between EM and the development of personality disorders (PDs) (Fonagy & Allison, 2014; Fonagy et al., 2015), most notably BPD due to the high prevalence of

relational trauma in BPD (Afifi et al., 2011; Battle et al., 2004; Hengartner et al., 2013; Scott et al., 2012).

Although the theory of ET and EM is rather novel, it has quickly become widely accepted in the field, despite much empirical evidence. Only two studies have found significant associations between EM (and Epistemic Credulity, EC) and low mentalizing abilities, as well as higher levels of childhood adversity, insecure attachment, and severity of symptoms. In addition, EM (and EC) was found to mediate between early adversities and the severity of psychopathology (Campbell et al., 2021; Liotti et al., 2023). However, a limitation of both studies is that they were conducted in community samples only and did not investigate the relationship between ET and PDs. Also, little is known about the assumed transdiagnostic characteristics of ET, which would require studying its features across different patient groups in mental health settings and comparing these to the general population.

Therefore, departing from the idea of ET as a transdiagnostic feature closely associated with the level of interpersonal impairments, we expected to find lower levels of ET in a group of patients with Personality Disorders as compared with a sample of patients with Anxiety Disorder and that in both ET would be lower than in a control, community sample. Secondly, to account for the supposed dimensionality of ET and pathology, we explored across a pooled sample, including both clinical samples and a community sample, if impairments in the level of ET were associated with (i) severity, (ii) the type and (iii) the number of comorbid Personality Disorders. In line with the theoretical model of ET, we expected that lower levels of ET would be associated with more symptoms of PD as well as a larger number of different PD diagnoses. Regarding to PD type, we expected lower levels of ET in patients with BPD and we assumed an association between the number of BPD symptoms and (low) levels of ET, following the assumption that BPD reflects the PD most characterized by EM. To the best of our knowledge, this is the first study investigating these associations in a clinical sample including patients with severe PD.

METHODS

Participants and procedure

Three samples were recruited. The first sample consisted of patients with severe and complex PDs who were recruited at the AMBIT (Adaptive Mentalization Based Integrative Treatment) units, five outpatient units in a Dutch Mental Health Institution. All patients were approached yearly by an institutional research team for collecting routine outcome data on their progress in treatment and measures for this study were integrated within this routine. 454 Patients of the AMBIT teams were informed about the study of whom 164 (36%) agreed to participate, 107 of them (65%) completed all questionnaires. No differences in general psychopathology were found in the measurement of responders and non-responders.

The second sample of patients was recruited at the Academic Anxiety Center of a Dutch Mental Health Institution. To reduce diagnostic overlap with the first patient sample, patients with a comorbid PTSD were excluded. 185 Patients meeting criteria for anxiety disorders (anxiety sample) met the inclusion criteria of whom 60 (32,4%) participated and completed the questionnaires. Patients meeting criteria for PDs and anxiety disorders (ADs) gave both informed consent before completing the online package of questionnaires.

The third (control) sample was recruited in the community. With the assistance of students in clinical psychology, the researchers reached a convenience sample of individuals. Social media were used to spread the questionnaires that were administered as an online survey using the software Qualtrics (Qualtrics, 2019). 130 Individuals signed informed consent and were included. One respondent did not complete the QET and nine respondents did not complete the SCID-5-SPQ. The study was approved by the institutional medical ethical review board (number CWO-1911).

Measurements

Questionnaire Epistemic Trust (QET)

The QET was designed to assess ET. The questionnaire consists of 24 items, measuring four dimensions of ET with each six items (masked reference et al., 2023). The

dimensions are: 1 Hypervigilance: the tendency to be overly vigilant with regard to the intentions of the other and thus the reliability of the knowledge and information of the other; 2 Curiosity/openness: the tendency to be genuinely curious about the opinions of others; 3 Expectation of help: the experience or expectation that one can benefit from the knowledge/information/advice of others; 4 Openness to help: the willingness to be open to the knowledge of the other in a counseling relationship.

The items concerned statements about trust and mistrust and were to be rated on a 5-point Likert scale varying from 1 (totally agree) to 5 (totally disagree). For example, the subscale hypervigilance included the item, "I am easily suspicious that information from most people cannot be trusted". After reverse scoring of negative formulated statements higher scores imply higher epistemic trust (theoretical range for 24 items: 24-120). A previous study showed high internal consistency, with a Cronbach's α of 0.91 for the total scale (masked reference et al., 2023). Construct validity was supported by associations with a number of related variables like personality functioning. In the current study Cronbach's α was 0.92.

Structured Clinical Interview for DSM-5 Diagnoses Screening Personality Questionnaire (SCID-5-SPQ)

The SCID-5-SPQ is a 106-item self-report questionnaire that was used to measure PD symptoms (as a measure of the severity of PD) and to distinguish between all ten types of PDs. Participants are asked to report on a dichotomous scale (0: no; 1: yes) if they experience specific PD symptoms. Three scores were calculated as outcome measure. First, we used the total number of PD symptoms. Second, we calculated the total number of PD diagnoses using the cut-off scores of the questionnaire. Third, we also used the total number of BPD symptoms as a dimensional measure of BPD features. Internal consistency of the SCID-5-SPQ was high: in the current study, Cronbach's α was 0.94.

Statistical analyses

We used samples of three different groups and reported gender and age distributions of each group using descriptive statistics. Since we pooled the three samples into a single large data set for the analyses of ET, we ensured that the ET-scores of participants of different groups were on the same scale by assessing measurement

invariance (MI). MI was tested by means of confirmatory factor analysis (CFA) in the combined sample, using multiple group structural equation modeling followed by the likelihood ratio test comparing the model without any restrictions to the model that restricts factor loadings to be equal across the three groups, where not rejecting the invariant loadings model implies MI. Additionally, we assessed fit indices for the combined sample: the root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the Standardized Root Mean Square Residual (SRMR). RMSEA values smaller than .06, SRMR values smaller than .08, and CFI and TLI values larger than .95 indicated a relatively good fit, as suggested by Hu and Bentler (1999). Next to the standard CFA model that with uncorrelated residuals over the entire model, we fitted an additional model that allowed correlated residual within factors and evaluated the model with less restrictions.

To explore the level of ET as a differentiating characteristic between groups, mean scores of QET were compared. To account for the supposed dimensionality of ET and psychopathology, the three samples were subsequently pooled, thereby spanning a broad range of mental problems in the sample. The pooled sample was used for subsequent correlational and mediation analyses.

A One-way analysis of variance (ANOVA) on the mean QET scores was performed to test equality in level of ET across the three samples. When the ANOVA indicated a significant effect, post hoc Tukey tests were conducted.

Associations between ET and severity and type of personality pathology were studied to account for the dimensionality. The association between ET and PD severity was explored by calculating Pearson's correlation coefficients between the QET score and the number of symptoms of PD and number of PD diagnoses. In addition, Pearson's correlation coefficients between QET and symptoms of the various types of personality disorder were explored. Finally, focusing on BPD only, Pearson's correlation coefficients were calculated between ET and the number of symptoms of BPD.

RESULTS

Sample characteristics and measurement invariance

In all of the three groups, the majority of respondents were women and overall, 75% of the participants was female. Participants in the community sample were on average somewhat older than both groups of patients. However, since we pooled the three samples, these differences in gender and age do not affect the results.

Measurement invariance across the three samples was demonstrated for the QET: chi-square(40) = 46.28, p=0.223, not rejecting the invariant loadings model. The results of the CFA indicated acceptable to good model fit for the standard model and a good fit for a model with correlated residuals. See Table 1 for the Fit Indices.

Table 1 Fit indices from confirmatory factor analyses in the combined sample.

Model	CFI	TLI	SRMR	RMSEA, 90% CI
4 factor, 24 items	.90	.88	.082	.078 (.071, .085)
4 factor, 24 items, CRs	.99	.99	.068	.023 (.000, .036)

Note: CRs = Correlated residuals; CFI = Comparative Fit Index; TLI + Tucker-Lewis Index, SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation, CI = confidence interval

Differences in level of ET between the three samples

A one-way ANOVA revealed that there was a statistically significant difference in ET between at least two groups ($F(2, 297) = 36.87$, $p < .001$). A post hoc Tukey HSD test indicated that the mean QET score in the AD sample (94.00) was significantly higher than in the PD sample (86.55, $p < .001$) and significantly lower than in the community sample (99.90, $p = .004$). The mean QET score of the PD sample was significantly lower than the mean QET score of the community sample ($p < .001$).

Relation between epistemic trust and severity of personality pathology

Table 2 shows the Pearson correlations between the QET total score, number of PD diagnoses, number of PD symptoms and number of BPD criteria. Correlations ranged between $r=-.48$ and $r=-.58$, showing strong negative associations between severity of (B)PD and level of ET.

The number of PD criteria was the highest in the in the PD sample, intermediate in the AD sample and lowest in the community sample. Furthermore, the number of PD diagnoses was the highest in the PD sample, intermediate in the AD sample and lowest in the community sample.

Relation between ET and types of Personality Disorders

Table 2 shows the associations between the QET total score and the total number of symptoms scored for each type of PD in the pooled sample. The QET-total score was significantly negatively correlated with all types of personality disorder except for the histrionic PD (see Table 2). Associations were most pronounced for avoidant, paranoid and Borderline PD, indicating lower ET for subjects displaying more features of these types of PD.

Table 2 Pearson Correlation Coefficients between Epistemic trust and number of PD criteria, number of PD diagnoses, number of PD symptoms, ten types of personality disorders according to the SCID-5-SPQ in total sample (n=283)

	Questionnaire Epistemic Trust
SCID number of PD criteria	-.577**
SCID number of PD diagnoses	-.560**
SCID number of BPD criteria	-.481**
SCID Avoidant PD	-.456**
SCID Dependent PD	-.246**
SCID Compulsive PD	-.304**
SCID Paranoid PD	-.440**
SCID Schizotypal PD	-.371**
SCID Schizoid PD	-,305**
SCID Histrionic PD	-.061
SCID Narcissistic PD	-.224**
SCID Borderline PD	. 440**
SCID Antisocial PD	. 205**

*p<.05 ** p<.01

DISCUSSION

Although Epistemic Trust has increasing theoretical and clinical support, very little empirical data are available about ET in patients treated in mental health. Our aims were to test (i) whether ET is more impaired in patients with personality disorders compared to patients with anxiety disorders, (ii) whether ET is more impaired in both patient groups compared to people in the community sample and (iii) whether ET is associated with severity of personality pathology and (iv) whether ET is more specifically associated with features of BPD.

Regarding our first two aims, we firstly found that impairments in ET were most elevated in PD patients as compared to AD patients and non-clinical controls, while impairments in ET were also elevated in AD patients compared to the community sample. This supports the assumed dimensional nature of personality impairments across different types of mental disorders (C. J. Hopwood, Wright, Ansell, & Pincus, 2013; Skodol et al., 2005) and is also in line with the assumed transdiagnostic features of ET (Luyten et al., 2020). These findings are furthermore in line with previous studies demonstrating that patients with PD experience more difficulties in establishing helpful mental pictures of their treatment providers and of the therapist relationship as compared to patients suffering solely from mental state disorders (Bender et al., 2003; Zeeck, Hartmann, & Orlinsky, 2006).

Concerning the relation with markers of personality pathology severity, our results secondly showed strong associations between level of ET and the severity of personality pathology, as indicated by the number of PD diagnoses and the number of PD symptoms (Crawford, Koldobsky, Mulder, & Tyrer, 2011; C. J. Hopwood et al., 2011; Christopher J Hopwood & Zanarini, 2010). These findings support the idea that although ET is a transdiagnostic feature spanning all types of mental problems, severe impairments in ET may be most present in patients with severe interpersonal impairments, as indicated by severity of PD.

Thirdly, when looking more specifically into the type of PD, we found moderate relations between the level of ET and the severity of BPD. However, we also found significant associations with most other types, most specifically with avoidant and

paranoid PD. Findings regarding BPD were expected based upon strong evidence for interpersonal trauma in patients with BPD and the assumed intrinsic relationship between impairments in ET and specific features of BPD. These findings are in line with previous studies showing specific biases of patients with BPD towards hostile attributions (Donegan et al., 2003; Wagner & Linehan, 1999; Westen, Ludolph, Lerner, Ruffins, & Wiss, 1990) and their difficulties to create a helpful alliance in treatment (Bender et al., 2003; Zeeck et al., 2006). Substantial associations with avoidant and paranoid PD were less expected but may be in line with findings stressing that comorbid avoidant and paranoid features are associated with increased complexity and are predictive of poor prognosis in patients with BPD (Bateman & Fonagy, 2013; Kvarstein & Karterud, 2012). Paranoid PD, like BPD, is associated with childhood trauma and is marked by deficiencies in cognitive empathy and cognition (Lee, 2017). From a more theoretical perspective, Kernberg also classified paranoid PD as a subtype of borderline character pathology, a "lower order" level of character organization characterized by minimal super-ego integration, and excessive aggressive drives (Kernberg, 1970). Similarly, the association with avoidant features could be explained through the specific characteristics seen in patients with avoidant PD. A dismissive attachment style, associated with a negative sense of self and a fear of intimate relationships, has indeed been suggested to contribute to the development of an avoidant PD (Lampe & Malhi, 2018). Avoidant individuals tend to be more distrustful of others, are often hypersensitive to criticism and rejection, and rely on avoidant coping strategies. These findings thus confirm on the one hand the transdiagnostic and dimensional nature of ET but could also suggest that specific types of interpersonal impairments – beyond BPD – may be more specifically associated with lack of ET.

Strengths and Limitations

This is the first study comparing the level of ET across different clinical samples and investigating the relationship between ET and (specific types of) PDs. A major strength of this study is the inclusion of both patients meeting criteria for very severe PD wherein insecure attachment, problematic mentalizing, and epistemic mistrust are highly prevalent, as well as patients with anxiety disorders who are supposed to have less interpersonal impairments, thereby spanning a broad range of mental problems.

There are also some limitations to our study that need to be discussed. Usually, the SCID-5-SPQ is used as a screener prior to the SCID-5-PD structured interview to shorten the administration of this interview. However, in our study, we used the questionnaire to estimate the number of PD symptoms and disorders. Using this questionnaire made it feasible to collect data in both samples of patients and participants in the community sample but does not have the same diagnostic quality as a structured clinical interview. Furthermore, self-report questionnaires were used to assess ET and PD, making responses susceptible to various forms of biases, such as desirability and limited self-awareness (Silva, Loureiro, & Cardoso, 2016). This may have contributed to reporting bias which caused PD diagnoses to be missed or over-reported.

CONCLUSION

This is the first study investigating the level of ET and associations between ET and PDs among patients with PD, ADs and a community sample. In line with the idea of dimensionality of psychopathology, our results demonstrated more severe impairments in ET in patients with PD as compared to patients with anxiety disorders and subjects from the community. Our findings on associations between ET with the severity and types of PDs corroborate the theoretically assumed relations between ET and psychopathology and PDs in particular. Future research with larger samples and preferably prospective designs is needed to further explore and substantiate the theoretical assumptions about ET.

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6

Chapter 6

Associations between childhood adversity and epistemic trust, attachment, mentalizing, and personality pathology.

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ABSTRACT

The construct of epistemic trust (ET) has gained wide acceptance and support in the field, although there is little empirical evidence to substantiate the theoretical assumed model. Studies of the assessment of ET were conducted in community samples only and the mediating role of attachment and mentalizing in addition to ET was not investigated. This study examines the theoretical assumed relationships between ET and attachment and mentalizing as well as the mediating role of attachment, mentalizing and ET in the association between childhood adversity and borderline personality disorder (BPD) in a heterogeneous sample containing also patients.
The associations between ET and attachment, mentalizing, childhood maltreatment, and BPD were explored in a sample including subjects from the community as well as patients diagnosed with anxiety and personality disorders from two clinical samples. Multiple mediation analysis was performed to explore the mediating role of attachment, mentalizing and ET within the relationship between childhood trauma and BPD. Strong relationships between ET and attachment and mentalizing were found indicating that lower degrees of ET are associated with insecure attachment and lower reflective functioning. Attachment, mentalizing, and ET together accounted for 75% of the mediation between childhood adversity and BPD. Hypomentalizing and anxious attachment accounted for the largest share of the mediation.
Our findings provide preliminary evidence for the theoretical supposed model of ET and suggest relevance of ET in the mediation between childhood adversity and PDs, although the role of ET seems smaller than assumed by recent theories.

INTRODUCTION

Childhood interpersonal trauma is strongly associated with the onset of psychopathology in general and, more specifically, (borderline) personality disorders (Li et al., 2016; McKay et al., 2021; Porter et al., 2020). From a psychodynamic perspective, several theoretical constructs have been formulated to explain these detrimental effects of childhood trauma. Typically, the role of both attachment and mentalizing has been stressed (Luyten et al., 2020) which is supported by empirical evidence that the pathogenic effects of childhood maltreatment are mediated by mentalizing incapacity (Li et al., 2020) and attachment insecurity (Muller et al., 2012). More recently, it has been argued that in addition to attachment and mentalizing, (a lack of) Epistemic Trust (ET) may play an important role in the development of psychopathology stemming from childhood adversity (Fonagy et al., 2017a, 2017b). The concept of ET is rooted in developmental psychopathology and attachment theory and refers to the capacity to consider conveyed knowledge as trustworthy, relevant to the self, and generalizable to other contexts (Fonagy & Allison, 2014; Fonagy et al., 2015). Although ET is assumed to be theoretically associated with attachment and mentalizing, it has been argued that it provides additional comprehensive value to explain the onset and continuation of mental health problems because of reduced resilience in later life due to epistemic mistrust (EM) (Jurist, 2005, 2008; Luyten et al., 2020).

The theory of ET/EM proposes that early negative childhood experiences may not only lead to attachment insecurity and impaired mentalizing (Luyten et al., 2020) but may also dispose an individual to adopt a rigid and pervasive hypervigilant position toward information coming from others, resulting in high levels of EM (Fonagy et al., 2015; Fonagy et al., 2017a, 2017b). Although ET contains as well dispositional as state-like aspects and is supposed to be context-dependent, this mistrust may become a rather stable personality feature, defining the more general tendency of a person to be open or closed off towards (social) information from others (Knapen et al., 2022). Childhood adversity is thus thought to create long-term disruptions in the capacity to adapt by compromising social learning (Elklit et al., 2018; Germine et al., 2015; Hanson et al., 2017) leading to an (implicit) attitude of mistrust in the social environment. This disposition of EM is believed to increase the risk of developing psychopathology (4, 9)

and might explain the profound rigidity and the 'hard to reach' character of patients with severe psychopathology. Although the concept of ET is essentially transdiagnostic, a more intrinsic relationship between epistemic mistrust and the development of personality disorders (PDs), more specifically Borderline PDs (BPD), is assumed (Fonagy & Allison, 2014; Fonagy et al., 2015). From this perspective, (B)PDs are conceptualized by Fonagy et al. as a failure of communication arising from an impaired capacity to learn from others. Figure 1 shows a model of the supposed relationship between childhood trauma, epistemic trust, attachment, mentalization and (B)PD.

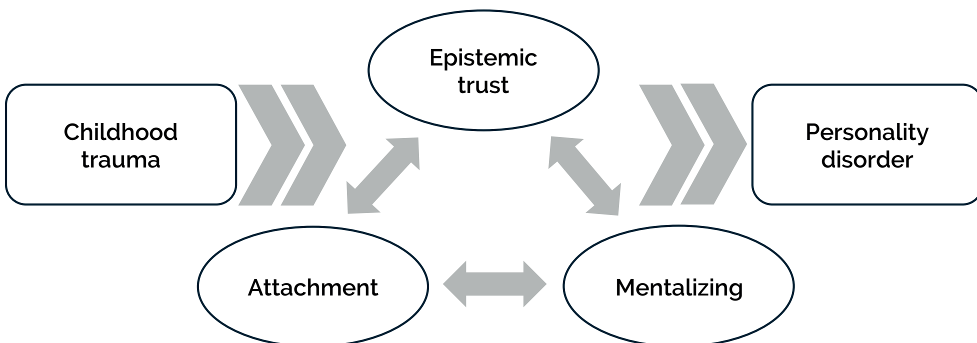


Figure 1 Supposed relationship between childhood trauma, epistemic trust, attachment, mentalizing and (borderline) personality disorder

Although the theory of ET has gained wide acceptance and support in the field and offers important opportunities for clinical intervention, there is still a lack of empirical evidence to substantiate the theoretical assumed model. Studies with the recently developed Epistemic Trust, Mistrust, Credulity Questionnaire (ETMCQ) showed meaningful associations in a community sample between ET, EM and Credulity on the one hand and childhood adversity and a global psychopathology severity index on the other hand (Campbell et al., 2021; Liotti et al., 2023). Both factors mediated between childhood adversity and mental health symptoms and were positively associated with lower mentalizing and insecure attachment styles. However, a limitation of both studies is that they were conducted in community samples and therefore did not include a sample in which pathogenic levels of epistemic mistrust, insecure attachment and impaired mentalizing can be assumed. Furthermore, the possible mediating role of attachment and mentalizing between childhood adversity and psychopathology was not investigated. Another study, again only in a community sample, found that ET and personality functioning relevantly mediated between

childhood adversity and posttraumatic stress disorder, but the role of attachment and mentalizing in the mediation was not investigated (Kampling et al., 2022).
The current study investigates the mediating role of attachment, mentalizing and epistemic trust in the association between childhood adversity and features of BPD, in a sample including relatively healthy subjects from a community sample as well as patients diagnosed with anxiety and personality disorders from two clinical samples. Given the recent theoretical assumptions regarding the primary role of epistemic mistrust in this association, we were specifically interested in the mediating role of ET in addition to the previously investigated mediating role of attachment and mentalizing. In line with the model discussed above, we hypothesized that Epistemic Mistrust is significantly associated with childhood adversity, insecure attachment, lower mentalizing abilities, and symptoms of BPS. Furthermore, we assumed that EM, attachment insecurity and mentalizing incapacity mediates the relationship between early adversities and symptoms of BPD. Based on the literature, we expect ET to account for the largest part of the mediation.

METHODS

Participants and procedure

Three samples were recruited to capture the full range of severity from healthy to severely impaired personality functioning. The first sample (PD sample) consists of patients with severe and complex PDs who were recruited at the AMBIT (Adaptive Mentalization Based Integrative Treatment) units, five outpatient units in a Dutch Mental Health Institution. All patients were approached yearly by an institutional research team for collecting routine outcome data on their progress in treatment and measures for this study were integrated within this routine. 454 Patients of the AMBIT teams were informed about the study of whom 164 (36%) agreed to participate, 107 of them (65%) completed all questionnaires.

The second sample of patients was recruited at the Academic Anxiety Center of a Dutch Mental Health Institution. 185 Patients (anxiety sample, AD) met the inclusion criteria of whom 64 (32,6%) participated and completed the questionnaires. Patients meeting criteria for PDs and anxiety disorders both gave informed consent before completing the online package of questionnaires.

The third sample was recruited in the community. With the assistance of students in clinical psychology, the researchers reached a convenience sample of individuals. Social media were used to distribute the questionnaires that were administered as an online survey using the software Qualtrics (Qualtrics, 2019). 129 Individuals signed informed consent and were included.

Not being able to read and understand Dutch sufficiently was an exclusion criterion in all samples. The study was approved by the institutional medical ethical review board (number CWO-1911).

Measurements

Questionnaire Epistemic Trust (QET)

The QET was designed to assess ET. The questionnaire consists of 24 items, measuring four dimensions of ET (Knapen et al., 2023). The items concerned statements about trust and mistrust and were to be rated on a 5-point Likert scale varying from 1 (totally agree) to 5 (totally disagree). For example, "I am easily suspicious that information from most people cannot be trusted". After reverse scoring of negative formulated statements higher scores imply higher epistemic trust (theoretical range for 24 items: 24-120). A previous study showed high internal consistency, with a Cronbach's α of .91 for the total scale (Knapen et al., 2023). Construct validity was supported by associations with several related variables like personality functioning, working alliance and general psychopathology. In the current study Cronbach's α was .92.

Childhood Trauma Questionnaire-Short Form (CTQ-SF)

To assess childhood maltreatment, the CTQ-SF (Bernstein et al., 2003) was used. This 28-item retrospective self-report scale includes five subscales: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. All items are statements beginning with the phrase "When I was growing up..." followed by a statement such as "I believe I was emotionally abused" or "I believe that someone in my family hated me". All five subscales are sums of the scorings from 'never true' (score 1) to 'very often true' (score 5), higher scores indicating more childhood maltreatment. The CTQ-SF demonstrated acceptable to high internal consistency (Bernstein et al., 2003; Thombs et al., 2009). In the current study Cronbach's alpha's

were .91 for emotional abuse, .91 for physical abuse, .94 for sexual abuse, 0.92 for emotional neglect, .66 for physical neglect and .95 for the total score.

Reflective Functioning Questionnaire (RFQ)

To measure respondents' capacity to adequately interpret mental states of both the self and others, the RFQ (Fonagy et al., 2016) was used. This self-report instrument contains eight items and includes two subscales: certainty (RFQc) and uncertainty (RFQu) about mental states. Certainty is supposed to reflect too much certainty about mental states (i.e. hypermentalizing), whereas uncertainty reflects little certainty about mental states (i.e. hypometalizing). Responses are rated on a 7-point Likert scale (Strongly disagree - Strongly agree). A mean score is calculated for each of the two subscales. The RFQ showed an internal consistency of .77 (RFQu) and .65 (RFQc) in a clinical sample, and .63 (RFCu) and .67 (RFCc) in a non-clinical sample (Fonagy et al., 2016). In the current study, the alpha's for the RFQu subscale and RFQc scale were .83 and .81, respectively.

Experiences in Close Relationships – Revised (ECR-R)

Adult attachment style was measured using the 36-items ECR-R (Fraley et al., 2000) with the subscales Avoidance and Anxiety. Avoidant individuals tend to find discomfort with intimacy and seek independence, whereas anxious individuals tend to fear rejection and abandonment. A sample item is "I prefer not to be too close to others". Items can be answered on a 7-point Likert scale ranging from 1 (disagree strongly) to 7 (agree strongly). Higher scores indicate more anxiety and avoidance. In the present study, the Cronbach's alphas for the ECR-R Anxiety and Avoidance scales were .91 and .92, respectively.

McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD)

To assess symptoms of borderline personality disorder, the MSI-BPD (Zanarini et al., 2003) was used. The first eight items of the MSI-BPD represent the first eight DSM-IV diagnostic criteria for BPD, while the last two items assess the final DSM-IV criterion, i.e., the paranoia/dissociation criterion. Items are rated dichotomously. When totaled, scores can range from 0 to 10. The Dutch translation of the MSI-BPD has shown good psychometric properties (André et al., 2015). In the current study, Cronbach's alpha of the MSI-BPD was .84.

Statistical analysis

Descriptive statistics were computed for gender and age. Total scores were calculated for the QET, the MSI-BPD and the CTQ-SF, while for the latter scale also scores for each of the five subscales were computed. Regarding attachment, scores on the ECR avoidance and anxiety scales were calculated, and for the ability to mentalize scores for the RFQu and the RFQc subscales were determined.

The association between ET and respectively attachment, ability to mentalize, childhood maltreatment and symptoms of BPD was explored by calculating Pearson's correlation coefficients between the QET score on one hand and the (two subscales of the) ECR, the (two subscales of) the RFQ, the MSI-BPD and the total CTQ-SF and its five subscales on the other hand, respectively.

Furthermore, multiple mediation analysis was performed to explore the mediating role of several measures within the relationship between severity scores of childhood trauma (CTQ-SF) and the number of symptoms of borderline personality disorder (MSI-BPD). Mediating roles of the following variables were studied: ET measured by the QET, attachment measured by the ECR Avoidance- and ECR Anxiety subscales, capacity to interpret mental states by the RFQ Certainty- and RFQ Uncertainty subscales. For this analysis the PROCESS tool for SPSS (Hayes, 2013) was used. A parallel multiple mediator model enabled exploration of specific indirect effects of each of the five possible mediators, whilst controlling for the other possible mediators.

RESULTS

Sample used for analyses

Data of all three samples (PD sample, AD sample and community sample) were pooled and only cases without missing values on each of the used questionnaires were included. As a result of this, the PD sample was reduced from 107 to 104 participants. The AD sample was reduced from 64 to 62 participants. Due to the length of the combination of questionnaires, participants in the community sample were given the opportunity to stop the questionnaire prematurely resulting in a reduction of the sample from 129 to 79 participants. Altogether, this left a total n of 245, to conduct the analyses on.

In all samples, the majority of respondents were women and overall, in the (pooled) total sample, 76% of the participants were female. The mean age of the participants in the total sample was 41.7 (SD=13.5).
Table 1 describes the mean scores on each of the questionnaires used.

Table 1 Sample characteristics

	Mean (SD). N=245
QET	93.07 (13.32)
ECR Avoidance	3.90 (1.14)
ECR Anxiety	3.49 (1.16)
RFQ Certainty	1.25 (0.87)
RFQ Uncertainty	0.72 (0.71)
MSI-BPD	3.07 (2.90)
CTQ total	47.52 (19.77)
Emotional abuse	11.05 (5.92)
Physical abuse	7.13 (4.40)
Sexual abuse	7.75 (5.23)
Emotional neglect	14.47 (5.48)
Physical neglect	8.12 (3.40)

QET, Questionnaire Epistemic Trust; ECR, Experiences in Close Relationships – Revised; RFQ, Reflective Functioning Questionnaire; MSI, McLean Screening Instrument for Borderline Personality Disorder; CTQ-SF, Childhood Trauma Questionnaire-Short Form

Relation between epistemic trust and attachment, capacity to mentalize and childhood maltreatment

Table 2 shows the correlations between trauma, epistemic trust, attachment and mentalizing. There was a negative correlation between the QET-total score and ECR Anxiety, $r(245) = -.549$, $p < .001$ and between QET and ECR Avoidance $r(245) = -.469$, $p < .001$, indicating that a lower score on epistemic trust was significantly associated with an avoidant and anxious attachment style.

The QET-total score was positively associated with RFQc, $r(245) = .461$, $p < .001$ and negatively related to RFQu, $r(245) = -.417$, $p < .001$, indicating significant relations between ET and reflective functioning. This indicates that higher ET is associated with more certainty about mental states, while more epistemic mistrust is associated with more uncertainty. The QET-total score was negatively related to the total CTQ-SF score and to each of the subscale scores, suggesting a strong relation between childhood trauma and ET. The strongest (negative) association was found between epistemic trust and emotional abuse: $r(245) = -.384$, $p < .001$.

Table 2 Correlations between epistemic trust and total CTQ-SF, CTQ-SF subscales, ECR Avoidance and ECR Anxiety, RFQ Certainty, RFQ Uncertainty and MSI-BPD in total sample (n=245)

	QET	CTQ-SF total	Emotional abuse	Physical abuse	Sexual abuse	Emotional neglect	Physical neglect	ECR avoidanc	ECR anxiety	RFQ Certainty	RFQ Uncertai	MSI
QET	1											
CTQ-SF total	-.411***	1										
Emotional abuse	-.384***	.887***	1									
Physical abuse	-.351***	.789***	.633***	1								
Sexual abuse	-.282***	.765***	.530***	.617***	1							
Emotional neglect	-.327***	.808***	.731***	.451***	.415***	1						
Physical neglect	-.307***	.770***	.606***	.518***	.518***	.593***	1					
ECR avoidance	-.549***	.481***	.406***	.369***	.320***	.465***	.368***	1				
ECR anxiety	-.469***	-440***	.478***	.329***	.280***	.392***	.238***	.310***	1			
RFQ Certainty	.461***	-.332***	-.366***	-.265***	-.236***	-.238***	-.203***	-.289***	-.656***	1		
RFQ Uncertainty	-.417***	.452***	.471***	.340***	.351***	.355***	.259***	.300***	.670***	-.704***	1	
MSI-BPD	-.557***	.528***	.521***	.400***	.423***	.396***	.359***	.436***	.679**	-.639**	.730**	1

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

Multiple mediation between childhood maltreatment and BPD

Results of the multiple mediation analysis are shown in Figure 2 with standardized coefficients presented.

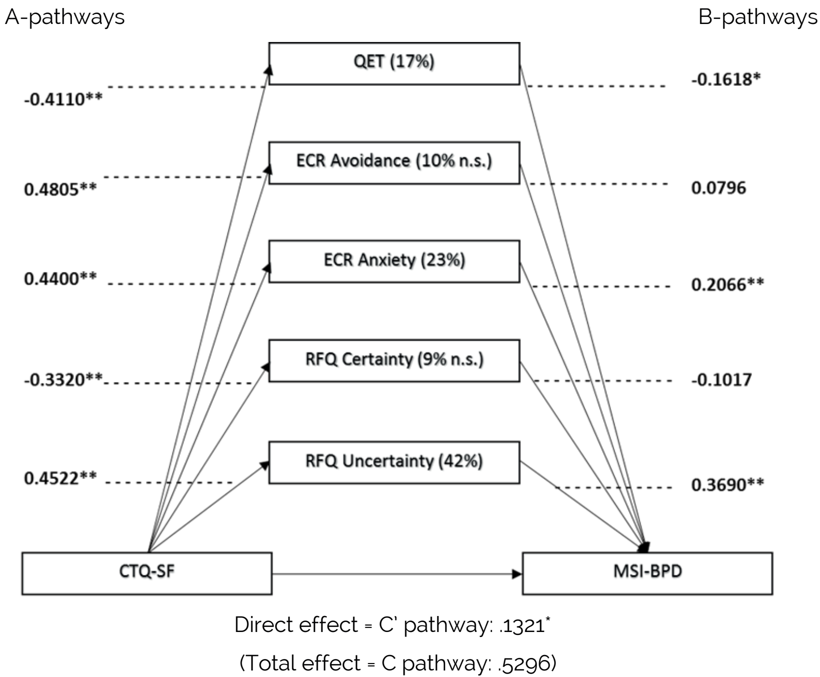
The total CTQ score was directly positively associated with the MSI-BPD, independent of any possible mediators (direct effect b = 0.132, 95% CI: .040 to .224, p=.005). This indicates that more childhood maltreatment is associated with more symptoms of BPD.

With respect to the indirect paths, support was found for partial mediation by three of the five included possible mediators. Support was found for an indirect effect of ET (indirect effect b = (-.411*-.162 =) .067, bootstrapped 95% CI: .020 to .109) as a mediator between attachment and BPD symptoms.
In addition, support was found for an indirect positive effect of the ECR Anxiety subscale on symptoms of BPD (indirect effect b = (.440*.207 =) .091, bootstrapped 95% CI: .039 to .153). However, the ECR Avoidance subscale did not mediate between attachment and BPD symptoms (b = (.481*.080 =) .038, bootstrapped 95% CI: -.007 to .091).

Results also revealed an indirect mediation effect of the RFQ Uncertainty subscale (indirect effect b = (.452*0.369 =) .167, bootstrapped 95% CI: .098 to .255) whereas RFQ Certainty did not mediate the association between childhood maltreatment and BPD symptoms significantly (b = (-.332*-.102 = .034, bootstrapped 95% CI: -.005 to .082)).

The sum of all indirect effects is .396 and thus the proportion of the indirect effects on the total effect is (.396/ (.396+.132) =) 75%. The RFQ Uncertainty subscale accounts for the largest part (42%) of this effect whereas ET and ECR Anxiety account for 17% and 23% respectively.

Figure 2 Multiple mediation analysis establishing the indirect effect of ET, attachment and capacity to mentalize on the relationship between childhood maltreatment and symptoms of BPD



n.s = Not statistically Significant

DISCUSSION

The aim of the present study was to examine the relationship between ET and conceptually related concepts such as attachment and mentalizing in a sample containing subjects from the community as well as patients. More specifically, we wanted to test the hypothesis that ET plays a mediating role between (different types of) childhood maltreatment and the development of features of BPD and how this role relates to the mediating role of attachment and mentalizing. The main findings can be summarized as follows. Strong relationships between ET and attachment avoidance on the one hand and anxiety and mentalizing on the other hand were found indicating that lower degrees of ET are associated with insecure attachment and lower reflective functioning. Attachment, mentalizing and ET together accounted for 75% of the mediation between childhood adversity and symptoms of BPD. Hypomentalizing

(uncertainty about mental states) and anxious attachment accounted for the largest share in the mediation, while epistemic (mis)trust only accounted for a small share of the association between childhood trauma and BPD features.
Several of these findings are in line with current psychodynamic theories and support previous findings regarding the hypothesized associations between epistemic trust, attachment and mentalizing (Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy et al., 2017b; Luyten et al., 2020). As in the (few) previous studies (Campbell et al., 2021; Liotti et al., 2023), our study also found moderate to strong associations between ET on the one hand and attachment and mentalizing on the other hand. In addition, we also found moderate to strong associations between ET and all types of childhood maltreatment, supporting the idea that epistemic mistrust relates to childhood experiences of trauma (Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy et al., 2017b; Luyten et al., 2020).

Less expected were the findings of the multiple mediation analysis, especially regarding the role of epistemic trust. Whereas attachment, mentalizing and ET together accounted for 75% of the mediation between childhood adversity and symptoms of BPD, ET only accounted for 17% of this mediation. While these findings support on the one hand the potentially important role of these concepts in personality disorders stemming from childhood adversity, the role of attachment (31,7%) and mentalizing (50,5%) was surprisingly (much) more pronounced than the role of epistemic trust. More specifically, attachment anxiety and uncertainty about mental states (hypomentalizing) accounted for the largest part of the mediation, respectively 22 and 42%. This contradicted our hypothesis that ET would be the most important factor.

Regarding the role of mentalizing, it's remarkable that particularly hypomentalizing – the strong uncertainty about mental states – shows explanatory value as compared to hypermentalizing. This could support the idea that trauma resulting in increased mental confusion may be associated with increased BPD symptom levels. However, an alternative explanation may be related to the measure we used to assess mentalizing. A critical evaluation of the RFQ it found that the RFQ assesses rather a single latent dimension related to hypomentalizing while the instrument is unlikely to capture maladaptive forms of hypermentalizing (29). In addition, very strong associations were

found between the RFQ and measures of personality pathology, while associations with symptom distress were less strong. A commonality analysis indicated that associations with personality pathology are inflated because some of the items of the RFQ tap into emotional lability and impulsivity rather than mentalizing (Müller et al., 2022). As also our study used symptoms of BPD as outcome measure, this may explain the large share of the RFQ in the mediation. Indeed, measures of hypomentalizing and BPD features showed a very strong correlation in our study, suggesting that the measures used to assess these concepts are not distinctive enough.

Regarding the role of attachment, we found a particularly strong mediational role of attachment anxiety. The important role of anxious attachment may be explained by studies showing high prevalence of anxious attachment in BPD patients. Cohen and colleagues demonstrated that specifically anxious attachment was a significant mediator of the effect of childhood trauma on self-control, identity integration, and relational domains (Cohen et al., 2017). Another study showed that attachment anxiety fully mediated the relationship between specific types of traumas (emotional abuse and physical neglect) and emotional dysregulation (Erkoreka et al., 2022). According to these authors, BPD may reflect high levels of negative affectivity, i.e. frequently experiencing intense emotions and anxiously attached patients could feel largely incompetent to deal themselves with these intense trauma-related emotions, resulting in more BPD symptoms related to trauma (Erkoreka et al., 2022).

Finally, the role of epistemic (mis)trust was much smaller than we initially expected. Based upon recent theories stressing the role of ET as a proximal and more specific transdiagnostic feature related specifically to BPD, we expected that the pathway through ET would be larger than pathways through attachment and mentalizing. There may be several explanations. Firstly, our measure of ET was more strongly associated with attachment avoidance than with attachment anxiety. A meta-analysis showed that attachment avoidance showed less associations with mental health outcomes than attachment anxiety (Zhang et al., 2022). Therefore, one explanation could be that epistemic mistrust is mainly related to an avoidant relational style, which is less 'predictive' of the emotional dysregulation that is usually more characteristic of symptom presentations of patients with BPD seeking help because of emotional dysregulation. One explanation may thus lie in the selection of treatment-seeking

patients with (features of) BPD. An alternative explanation could be the mentioned lack of distinctiveness of our measures of (hypo)mentalizing and (anxious) attachment on the one hand and features of BPD on the other hand. As these measures may be conceptually strongly related, they may 'consume' the largest share of the mediation. Finally, our findings may also question the assumed central role of ET in recent theories. Whereas previous studies also investigated the mediating role of ET (however using a different measure, the ETMCQ, and using general psychopathology outcome measures, (Campbell et al., 2021; Liotti et al., 2023), they did not investigate the mediating role of attachment and mentalizing which prevents us from comparing our results with these studies. Our findings at least suggest that EM may be less central than assumed. This is in contrast to the study of Liotti and collegues, who found especially EM to play an essential role in maladaptive psychological functioning (Liotti et al., 2023). More in general, our study showed high intercorrelations between these three constructs, which could also suggest that they are largely intertwined and may not be easily distinguished.

Although our study did not support a strong role for ET in the association between trauma and BPD, we cannot rule out the possibility that ET has a stronger mediational role or predictive value for other outcomes. Previously, it has been argued that EM may interfere with establishing an effective therapeutic alliance and in this way may exert its influence on treatment outcome (Knapen et al., 2020; Nolte et al., 2023). If ET has the potential to predict future therapeutic alliance and through that outcome, it could have incremental value over attachment alone, but this is still open for future investigation.

Strengths and limitations

To the best of our knowledge this is the first study investigating the relationship between childhood trauma, attachment, mentalizing, BPD symptomatology and epistemic trust in a sample containing a broad range of mental disorders as well as healthy controls. We believe it is a major strength that we had access to both patients suffering from very severe PDs in whom insecure attachment, problematic mentalizing and epistemic mistrust are highly prevalent, and patients with less severe psychopathology like anxiety disorders.

Nonetheless, there are also limitations that need to be discussed. First and probably most importantly, the use of mediation analysis on cross-sectional data has been questioned (Maxwell et al., 2011). Although the theoretical model assumes causation, cross-sectional studies do not allow to draw any causal conclusions. They could also merely suggest that people who remember bad childhood experiences are also more emotionally dysregulated, uncertain about their mental experiences, more distrustful and more anxious in relation to others. Further longitudinal studies are needed. Second, findings on childhood maltreatment relied entirely on retrospective self-reports, which might result in recall bias (Scott et al., 2012) and could be affected by personality problems or actual functioning. The CTQ has found to be valid however, and no significant difference was found in a comparative study between prospective and retrospective self-reports of childhood maltreatment (Kessler et al., 2000). Third, self-report questionnaires were used to assess ET, attachment and reflective functioning, making responses susceptible to various forms of biases, such as desirability and limited self-awareness (Silva et al., 2016). Fourth, the current study did not consider other possible moderators on personality functioning, such as social determinants of mental health like socio-economic status or growing up in a different culture (Allen et al., 2014; Sharp et al., 2015). Finally, we used the MSI-BPD as a self-report measure for features of BPD. While this may limit the scope of psychopathological outcomes of the trauma-EM pathway, it has also been argued that BPD rather represents a general factor of severity of personality pathology instead or merely a specific type (Sharp et al., 2015). This may justify generalization of the current findings beyond BPD, as BPD may capture the more common core components of PDs.

CONCLUSION

This is the first study investigating the theoretically supposed associations between childhood trauma, attachment, mentalizing, epistemic trust, and (borderline) psychopathology in a heterogeneous sample. Our findings provide preliminary empirical evidence for the theoretical supposed model and suggest relevance of ET in the mediation between childhood adversity and PDs, although the role of ET seems smaller than assumed by recent theories. Future studies may use larger samples, longitudinal designs, different measures for ET and mentalizing and different outcome

measures to study the complex interplay between childhood adversity and psychopathology and the assumed role of attachment, mentalizing and ET, in more detail.

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7

Chapter 7

General Discussion

"Empathy underlies virtually everything that makes society work (like trust, altruism, collaboration, love, charity). Failure to empathize is a key part of most social problems (like crime, violence, war, racism, child abuse and inequity)".

Bruce Perry & Maia Szalavitz

The overall aim of this thesis was to make a start in unraveling epistemic trust in an empirical way. The first aim was to clarify the concept and define the clinical features of epistemic trust (ET) and mistrust (EM). The second aim was to make epistemic trust measurable through the development and validation of a measurement instrument. The third aim was to generate empirical support for the theoretical assumptions about the relations between epistemic trust and conceptually linked concepts such as childhood adversity, attachment, mentalizing and personality pathology. In this chapter, the answers to the general aims posed in Chapter 1 and explored in the subsequent chapters are summarized, followed by reflections on the main findings in the context of the current evidence, and a discussion of the implications of the findings for clinical practice and theory development.

Main conclusions based on the general aims of this thesis

1. Clarification of the concept of epistemic trust

In Chapter 3 we aimed to clarify the complex and highly theoretical concept of epistemic trust by seeking expert consensus on the definition and clinical features of epistemic trust (appendix C) and on a set of items that could operationalize these defining features to allow designing a tool to measure epistemic trust. Our interest to develop an assessment tool stemmed mainly from the need for early identification of patients at risk for not completing treatment or benefitting only marginally from treatment, which could provide some guidance regarding differential treatment selection. In Chapter 2 we postulate that epistemic trust may be seen as a measurable final common pathway through which interpersonal trauma exerts its influence on the therapeutic relationship and in that way on treatment outcome. We theoretically underpinned the potential utility of epistemic trust as a promising psycho-marker that can be used in assessing patients before treatment assignment to allow a more personalized treatment which is better tailored to the characteristics and clinical needs of patients.

In the Delphi study discussed in Chapter 3, an international panel of experts on personality disorders and epistemic trust reached consensus on the clinical features of epistemic trust. The response rate was high and there was a high level of agreement

among experts, demonstrating a strong consensus between experts on the definition and clinical features of epistemic trust and mistrust and its significance to the understanding of personality disorders. Agreement was also reached that epistemic trust is a trait-like disposition that is rather stable over time, but also depends on the actual relational context within a specific (therapeutic) encounter, determining whether trust is evoked or not. This will be discussed later.

2. Development and validation of a measurement instrument of epistemic trust

In a subsequent Delphi study, experts also agreed upon a set of items to measure the different defining features of epistemic trust and epistemic mistrust, resulting in a 49-item questionnaire to measure epistemic trust. In Chapter 4, we aimed to investigate the psychometric properties of the newly developed Questionnaire Epidemic Trust (QET). The 49-item version demonstrated four factors, which we interpreted as 1. Hypervigilance, 2. Expectation of Help, 3. Curiosity / Openness and 4. Openness to Help. To achieve a brief and easy-to-use instrument that may be useful for clinical and research purposes in line with our general aims, we subsequently reduced the number of items to 24. This became the final version of the QET which was used for all further analyses in this dissertation. Our findings showed good to excellent internal consistency for the total scale and each of the four subscales. The results of the Confirmatory Factor Analysis of the 24 item QET in a clinical and a community sample subsequently indicated an acceptable model fit. Our results further showed that all four scales were associated in a clinically meaningful way with a range of conceptually related variables, like severity of personality problems and level of general psychopathology, supporting the construct validity of the instrument. Moreover, the QET was positively associated with the quality of the working alliance and was able to significantly distinguish between a clinical sample and a community sample. Measurement invariance was demonstrated. All these findings were supportive of the QET as a promising, brief, and user-friendly instrument that could be used for a range of clinical and research purposes.

3. Generating empirical support for the theoretical assumptions about epistemic trust

In further investigating the theoretical assumptions derived from the model of epistemic trust, we firstly focused on the supposed interplay between epistemic trust and personality disorders and severity of pathology, detailed in Chapter 5. More specifically, we aimed to investigate differences in impairment of epistemic trust in two clinical and a community sample and to explore the assumed association between epistemic trust, personality disorders (PDs) and severity of PDs. As expected, we found that impairments in epistemic trust are more pronounced in patients meeting criteria for PD compared to patients meeting criteria for anxiety disorder, in whom epistemic trust was in turn lower than in subjects the community. This supports the assumed dimensional nature of personality impairments across different types of mental disorders (Hopwood et al., 2013; Skodol et al., 2005) and is also in line with the assumed transdiagnostic features of epistemic trust (Luyten et al., 2020). Looking at the relations of epistemic trust with severity of personality disorders, we found strong associations between epistemic trust and the number of PD diagnoses, and total (B)PD criteria met, which are considered as main indicators of severity in PDs (Crawford et al., 2011; Hopwood et al., 2011; Hopwood & Zanarini, 2010). When looking more specifically into the type of PD, we found, as expected, moderate relations between epistemic trust and borderline PD, however we also found substantial associations with paranoid and avoidant PD.

In chapter 6 we examine the theoretical assumed relationships between epistemic trust and attachment and mentalizing as well as the mediating role of attachment, mentalizing and epistemic trust in the association between childhood adversity and BPD. As expected, we found strong relationships between epistemic trust and attachment avoidance and anxiety, and mentalizing indicating that lower degrees of epistemic trust are associated with insecure attachment and lower reflective functioning. Attachment, mentalizing and epistemic trust together accounted for 75% of the mediation between childhood adversity and symptoms of BPD. Hypomentalizing (uncertainty about mental states) and anxious attachment accounted for the largest share in the mediation, while epistemic (mis)trust only accounted for a small share of the association between childhood trauma and BPD features.

DISCUSSION OF MAIN FINDINGS

Defining epistemic trust

This thesis contributed to clarify what the rather theoretical concept of epistemic trust entails by defining the (clinical) features of epistemic trust by an international panel of experts on personality disorder and epistemic trust. Until now there is no other study that reports on the clinical features of epistemic trust. Appendix C illustrates how an epistemic (mis)trustful person appears in cognitive, affective and behavioral domains. Although there was a high level of agreement among experts, demonstrating a strong consensus about the concept of epistemic trust, there was also a relevant discussion about epistemic trust as a stable personality trait during the Delphi procedure. In the definitional features provided by the expert group, it was agreed upon that epistemic trust seems to exhibit both dispositional and state-like aspects. Epistemic trust seems to refer to a more stable feature of mental functioning making (some) people more prone to be epistemically (mis)trustful in (new) interpersonal interactions. However, this definition also enables the possibility for specific interactions to still trigger epistemic trust in persons who may be generally mistrustful. The concept thus seems to reflect as well dispositional as state- or context-dependent characteristics. In our opinion, this may not at all be uncommon and reflects a more common approach in the PD field where a given disposition or trait may determine someone's psychological functioning most of the time – and thus be characteristic for this person - but this doesn't mean that the disposition will be activated all the time (American Psychiatric Association, 2013). Concepts related to epistemic trust also show a similar duality of trait- and state-like features. Attachment theories distinguish between attachment traits and attachment states (Bosmans et al., 2014), stressing the context-dependency of attachment style. This has led to a paradigm shift from attachment as a relatively stable personality trait towards a more dynamic understanding of attachment (Kobak & Bosmans, 2019). Although attachment style may be largely stable and as such predictive of the actual relational style, specific attachment states may still be changeable and (partly) also depend on the specific attachment person involved in the dyad. We believe epistemic trust might be conceptually similar: although epistemic trust has features that are rather stable over time, the emergence of these features also depends on the actual relational context within a specific (therapeutic) encounter, determining whether trust is evoked or not.

Considering epistemic trust as a relative stable trait-like disposition may be of clinical importance because it implies that epistemic trust could be measured as a personal characteristic, and, in that way, could have incremental value in treatment assignment as argued in chapter 2. Though on the other hand, the context-dependent process implies it is also important to pay attention to a better understanding of which context and techniques elicit epistemic trust or specifically address epistemic mistrust within the therapeutic relationship, but also in the wider context around a patient. We will come back to this in more detail in the 'Implications for everyday clinical practice' section later.

The Delphi study focused on the definition of the concepts of epistemic trust and mistrust. The concept of epistemic credulity (EC) was not defined, since at the time of the study it had not yet been described by the founders of the theory. It refers to a lack of vigilance and discrimination, resulting in excessive and inappropriate trust in others, and in vulnerability to misinformation and potential risk of exploitation (Campbell et al., 2021; Liotti et al., 2023). Even though this was not accounted for in the Delphi study, we found some conceptual similarities in the validation study of the QET. Our factors 'openness to help' and 'curiosity' of the QET, could reflect epistemic credulity, but in the extreme variants of these dimensions. This questions the fact to what degree extreme scores on these two factors may still represent 'adaptiveness' or may reflect naiveté. Further studies should clarify this.

The model of epistemic trust in explaining (personality) pathology

An important aim of this thesis was to generate empirical support for the theoretical assumptions about the relations between epistemic trust and supposed conceptually linked concepts such as childhood adversity, attachment, mentalizing and personality pathology. This will be discussed below.

Childhood adversity, attachment and mentalizing

Developmental attachment theory assumes that the ability to recognize who is trustworthy, authoritative, and knowledgeable is learned in the context of safe attachment relationships (Corriveau et al., 2009). Mentalizing is presumed to be an essential ability for discerning intention and therefore is thought to play a crucial role in this process. In line with the current theory on epistemic trust and other studies on the

relationship between epistemic trust and attachment and mentalizing (Campbell et al., 2021; Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy et al., 2017; Liotti et al., 2023; Luyten et al., 2020), we found strong relationships between epistemic trust and attachment avoidance and anxiety and mentalizing, indicating that lower degrees of epistemic trust are associated with insecure attachment and lower reflective functioning. Moreover, we found strong associations between epistemic trust and all types of childhood maltreatment, supporting the idea that epistemic mistrust relates to childhood experiences of trauma.

Based upon recent theories stressing the role of epistemic trust as a proximal and more specific transdiagnostic feature related notably to borderline personality disorder (BPD), we were specifically interested in the mediating role of epistemic trust between childhood adversity and symptoms of BPD in addition to the mediating role of attachment and mentalizing. We expected epistemic trust to play the largest part in the mediation. Surprisingly, we found that epistemic trust only accounted for 17% of the mediation, whereas attachment anxiety and uncertainty about mental states (hypomentalizing) accounted for the largest part of the mediation, respectively 22 and 42%. This contradicted our hypothesis that epistemic trust would be the most important factor.

An explanation to this may be related to problems with the measures we used to assess mentalizing and attachment. In other studies, strong associations between the RFQ and measures of personality pathology (Müller et al., 2022) were found and since our study used symptoms of BPD as an outcome measure, this may explain the large share of the RFQ in the mediation. Also, attachment anxiety was found to show high prevalence in BPD patients. Specifically anxious attachment was found to be a significant mediator of the effect of childhood trauma on self-control, identity integration, and relational domains (Cohen et al., 2017). In another study attachment anxiety fully mediated the relationship between specific types of traumas (emotional abuse and physical neglect) and emotional dysregulation (Erkoreka et al., 2022). Again, there could be a lack of distinctiveness of our measure of (anxious) attachment on the one hand and features of BPD on the other hand. As these measures may be conceptually strongly related, they may therefore 'consume' the largest share of the mediation. This may be supported by the high intercorrelations we found between

hypomentalizing, attachment and BPD features in our study, which could suggest that they are largely intertwined and may not be easily distinguished.

Also, our measure of ET was more strongly associated with attachment avoidance whereas a meta-analysis showed that attachment avoidance showed less associations with mental health outcomes than attachment anxiety (Zhang et al., 2022). Therefore, one explanation could be that epistemic mistrust is mainly related to an avoidant relational style, which is less 'predictive' of the emotional dysregulation that is usually more characteristic of symptom presentations of patients with BPD but may be predictive of problems in the therapeutic alliance. We explain this further in the Importance of the therapeutic alliance section. However, it is worth mentioning that these findings are in contrast to two other studies (Liotti et al., 2023; Riedl et al., 2023), that found that especially epistemic mistrust plays an essential role in maladaptive psychological functioning.

Studies with the ETMCQ found that epistemic mistrust and credulity are strongly positively associated with psychopathology (Campbell et al., 2021; Liotti et al., 2023; Nimbi et al., 2023, Riedl et al., 2023, Tanzilli et al., 2022), although also inconsistent findings were observed regarding the relationship between epistemic trust and psychopathology. Reduced levels of psychological symptoms were not associated with higher scores on epistemic trust, nor was epistemic trust buffering against the negative consequences of childhood adversity. Riedl et al. (2023) found no association between baseline mentalizing level and epistemic trust, mistrust or credulity, but they did find that decreases in epistemic mistrust and credulity, and an increase in epistemic trust significantly correlated with improved mentalizing at the end of treatment.

In line with these inconsistencies, our findings may also question the assumed central role of epistemic trust in recent theories. Whereas previous studies also investigated the mediating role of epistemic trust, they did not investigate the mediating role of attachment and mentalizing which prevents us from comparing our results with these studies. A recent comprehensive review of 15 studies that investigated the relationship between epistemic trust, psychopathology, and psychotherapy, concluded that there is preliminary evidence for the theoretical assumption of epistemic trust, however also

inconsistencies were found (Li et al., 2023). Our findings may corroborate a model articulating that early and complex childhood trauma may predispose individuals to become epistemically distrustful, but the role of epistemic trust may be less central than assumed. The constructs of attachment, mentalizing and epistemic trust might be so strongly intertwined, that they can't be clearly distinguished. A major problem with the developmental attachment theory may be that epistemic trust, attachment and mentalizing are still difficult to measure. The question is how specific our instruments are and how much they really capture the concepts we want to measure, or whether they are general measures of psychopathology and therefore overlap greatly.

Personality disorders

The supposed inherent relationship between epistemic trust and personality disorders may be reflected by the moderate to high associations we found between the QET and particularly the subscales of the SIPP-SF Relational Capacities and Identity Integration. There is substantial evidence that personality disorders are associated with distorted thinking about self and others (Skodol et al., 2011) and identity and interpersonal impairments are therefore conceptualized as core components of personality disorders within the alternative DSM-5 model (Oldham, 2015). Mistrust in others results in problems in interpersonal functioning, which may lead to negative beliefs about oneself through negative experiences with others. Also, being rigid and not open to social learning makes it more difficult to navigate the social world and, in that way, again lead to negative experiences in self-functioning which further deepen negative beliefs about the self. Our findings may therefore reflect the problems with self and others so central in PDs and in this way indicate that epistemic trust may capture the core of personality functioning.

When looking more specifically into the different types of PD, we found moderate relations between epistemic trust and borderline PD. Findings regarding BPD were expected based upon strong evidence for interpersonal trauma in patients with BPD and the assumed intrinsic relationship between impairments in epistemic trust and specific features of BPD. These findings are in line with previous studies showing specific biases of patients with BPD towards hostile attributions (Donegan et al., 2003; Wagner & Linehan, 1999; Westen et al., 1990) and their difficulties to create a helpful alliance in treatment (Bender et al., 2003; Zeeck et al., 2006). The associations found

with avoidant and paranoid PD were less expected but may be in line with findings stressing that comorbid avoidant and paranoid features are associated with increased complexity and are predictive of poor prognosis in patients with BPD (Bateman & Krawitz, 2013; Kvarstein & Karterud, 2012). Paranoid PD, like BPD, is associated with childhood trauma and is marked by deficiencies in cognitive empathy and cognition (Lee, 2017). From a more theoretical perspective, Kernberg also classified paranoid PD as a subtype of borderline character pathology, a "lower order" level of character organization characterized by minimal super-ego integration, and excessive aggressive drives (Kernberg, 1970). Similarly, the association with avoidant features could be explained through the specific characteristics seen in patients with avoidant PD. A dismissive attachment style, associated with a negative sense of self and a fear of intimate relationships, has indeed been suggested to contribute to the development of avoidant PD (Lampe & Malhi, 2018). Avoidant individuals tend to be more distrustful of others, are hypersensitive to criticism and rejection, and rely on avoidant coping strategies. These findings thus confirm on the one hand the transdiagnostic and dimensional nature of epistemic trust but could also suggest that specific types of interpersonal impairments – beyond BPD – may be more specifically associated with a lack of epistemic trust.

IMPLICATIONS FOR EVERYDAY CLINICAL PRACTICE

Epistemic trust as a psychomarker for psychosocial interventions

Since epistemic trust reflects the tendency to be open to the knowledge of others, also in a counseling or therapeutic relationships, and the degree to which the other is trusted in expertise and expected to be helpful, we hypothesized epistemic trust may influence treatment outcome. The described factors above are all important contributors to the working alliance (Horvath, 2005), which is one of the most investigated common factors related to success in psychotherapy. There is vast evidence for the predictive value of the therapeutic alliance on outcome (Falkenstrom et al., 2014; Fluckiger et al., 2018; Horvath & Symonds, 1991; Sauer et al., 2010). As hypothesized, we found moderate to high (but not perfect) correlations between the QET and the WAI, which indicates that the QET and the WAI have similarities but also measure something different. Therefore, both constructs should be distinguished: the working alliance measures the alliance within a concrete therapeutic relationship,

whereas epistemic trust may have the potential to predict alliance in a future therapeutic relationship. Still, the strong relations found between the working alliance and epistemic trust may be a tentative indirect indication of the potential value of epistemic trust to predict outcome. Another possible indicator may be the strong relations we found between the QET and severity of (personality) pathology. Severity is until now the strongest predictor of outcome in the treatment of personality disorders (Skodol et al., 2011). The associations found between the QET and the HoNOS and the MANSA may reflect severity of malfunctioning. This is further corroborated by the strong relations we found between the QET and PD symptom severity measured with the SIPP-SF. Especially, associations with identity and relational functioning were high. Both are seen as the core of personality functioning and are strong indicators of severity of personality pathology (Hopwood et al., 2011). In another study on epistemic trust, higher mistrust and credulity scores were associated with higher scores on the global psychopathology severity index (Campbell et al., 2021), which is in line with our findings. We further found that epistemic trust is largely related to the number of PD diagnoses and total (B)PD criteria met, which are considered primary indicators of severity in PD (Bateman & Fonagy, 2013; Crawford et al., 2011; Hopwood et al., 2011; Hopwood & Zanarini, 2010). Additionally, our finding that epistemic trust was strongest related to borderline, avoidant and paranoid PD, may imply a relationship between epistemic trust and severity, since Kvarstein & Karterud (2012; 2019) suggested these as indicators of increasing complexity and negative prognosis. Finally, we found that impairments in epistemic trust were significantly more pronounced in patients meeting criteria of PD compared to patient with an anxiety disorder, in whom epistemic trust was in turn lower than in non-clinical controls. This is in line with the supposed dimensional character of mental disorders and the transdiagnostic features of epistemic trust and may suggest that the level of epistemic trust may be able to discriminate according to severity and may therefore have a function in treatment allocation, although the current results cannot be interpreted as evidence.

Importance of the therapeutic alliance

If epistemic trust partially mediates between childhood adversity and symptomatology of BPD, recovery from BPD may also require re-establishing epistemic trust. This may underline the importance of the therapeutic relationship in making interventions effective, especially in patients suffering from more severe PD (Jurist, 2018). There is

some support that the quality of the therapist relationship may especially be important in patients with more severe PD, confirming the importance of a cooperative stance within the therapeutic relationship (Monticelli & Liotti, 2021; Monticelli et al., 2022) as well as a genuine and authentic stance (Hutsebaut & Sharp, 2023). Epistemic mistrust may interfere with establishing an emotionally close and genuine therapeutic relationship and thereby may have the potential to influence the outcome of interventions. If this is the case, rekindling epistemic trust may therefore be an important goal within all psychological treatments. Psychological interventions may need to openly address the issue of mistrust in early sessions. Epistemic trust may develop because of repeated experiences of the therapist being professional and demonstrating a capacity to help (Folmo et al., 2019; Jaffrani et al., 2020). The therapist must display a level of expertise and empathy for the patient to gain a positive expectation of the therapist's trustworthiness. A trusting therapeutic relationship where the patient feels cared for, recognized, and helped deepens the bond of trust and attachment. In turn, this can create positive expectations in patients about their agency to cope with their difficulties, resulting in salutogenic behaviors (Wampold, 2015). Other studies on epistemic trust and psychotherapy provided some preliminary evidence for the associations between restoring epistemic trust and effective psychotherapy. Thomas & Jenkins (2019) found that epistemic trust appeared to be the overarching concept in understanding patient experiences of community based Mentalization Based Treatment (MBT). Also, Li et al. (2022) found that a shift in epistemic mistrust to trust was associated with better psychotherapy outcomes regardless of treatment orientations. Finally, Jaffrani et al. (2020) found that building a safe base and therapeutic alliance, and improving mentalization, facilitated epistemic trust.

Epistemic trust and the wider environment

The context in which epistemic trust may be re-established is not restricted to the therapeutic relationship only. Positive, trust-affirming relational experiences in the patient's own wider context beyond therapy may be even more crucial in facilitating the establishment of epistemic trust. Not only a good therapeutic bond but also stronger social support outside therapy predicts successful treatment outcomes (Fluckiger et al., 2018; Roehrle & Strouse, 2008). Research has shown that significant positive changes can also occur without treatment (Whiteford et al., 2013). A range of positive human relationships, especially in an environment characterized by benign

and secure attachment relationships, can generate ET and trigger a capacity for social learning. Teachers, peers, and social media also may change people's general expectations of trustworthiness. The APA Task Force reported that the largest factor influencing therapeutic outcomes was found to be what took place in the patient's life outside the therapy relationship (40%) (Norcross & Lambert, 2019). Positive, trust-affirming relational experiences in the patient's own social context may provide a crucial opportunity for recovery for many who do not have access to psychological support. This emphasizes the importance of intervening in the social world directly which goes far beyond psychotherapy alone. For example, according to the income inequality hypothesis, income inequality is associated with poorer health, in part because it reduces social trust (Rözer & Volker, 2016). Investments in public facilities that promote overall health, such as health care, education, and housing that enhance social solidarity and cohesion, may be crucial to constitute a more benign wider social environment in which trust can nurture. Restoring mentalizing and trust in the community as well as in individuals, may create mentalizing systems.

The contribution of extra-therapeutic factors to positive outcomes is a complex one. Li et al. (2022) demonstrate potential routes to create a shift from epistemic mistrust to trust, via therapy, via the social environment, or via both, which led to positive outcomes. Special attention is needed for patients who have difficulty making use of either therapy or the social environment. It is possible that therapy is currently not provided in a way that most effectively reaches those who need it most. This may be the case for example for people experiencing systematic racism or discrimination, which may lead to or enforce epistemic mistrust. In an untrustworthy environment, either in the therapeutic setting or in the outside world, developing epistemic trust may in fact be detrimental and maladaptive. Some people may live in social circumstances which are highly alienating, isolating, and deprived. In these circumstances, interventions are needed at the level of the wider social system, like family therapy or collaboration with other professional services to actively address problems such as systematic racism and discrimination, social thinning and isolation, aimed at making the social world in which a patient operates more benign.

Epistemic trust beyond the clinical arena

Even further beyond the clinical arena, epistemic trust may have value in many fields, for example in explaining some contemporary sociocultural dynamics, such as belief in conspiracy theories and fake news, and vaccine hesitancy. Maladaptive response patterns to pandemic restrictions were found to be related to dysfunctional personality traits, immature defense mechanisms, poor mentalizing, and epistemic mistrust or credulity (Tanzilli et al., 2022). Frenken and Imhoff (2023) found that conspiracy mentality was associated with a generalized tendency to perceive others as untrustworthy, independent of facial trustworthiness. Conspiracy mentality may be associated with an increased propensity to view the world as having malevolent intentions. Green & Douglas (2018) demonstrated that people with an anxious attachment style showed a greater tendency to believe in conspiracy theories and state that in this way conspiracy belief may, to some degree, have roots in early childhood experiences. This finding was supported by a large study of 2666 subjects by Leone and colleagues (2018). Pierre (2020) postulates that epistemic mistrust is the core component underlying conspiracist ideation that manifests as the rejection of authoritative information and may be understood as a sociocultural response to breaches of trust, inequities of power, and existing racial prejudices. Tanzer et al. (2021) found consistent evidence of the effect of epistemic disruption in generating vulnerability to accepting misinformation in five areas: fake news headlines, conspiracy thinking in general, conspiracy thinking about COVID-19, vaccine hesitancy in general, and COVID-19 vaccination hesitancy. Trust was not associated with better recognition of fake news, though Individuals with higher credulity and mistrust were more likely to believe COVID-19 conspiracy theories, showed greater skepticism toward official accounts, and were less willing to receive the COVID-19 vaccine or to believe in the safety of the vaccination program. They concluded that trust may not act as a resilience factor for psychopathology, but rather mistrust and credulity constitute vulnerability factors. This argues for mitigation strategies that address both mistrust, credulity, and misinformation processing, with interventions for individuals, institutions of authority, and society as a whole. The theory of epistemic trust might provide a useful framework in understanding and addressing these problems.

METHODOLOGICAL CONSIDERATIONS

Although our findings may provide a promising first step in generating empirical support for the theoretical assumptions about epistemic trust, there are also a few limitations to this thesis that need to be discussed. First, in the Delphi study, there was a limited number of experts (7). Epistemic trust is a rather novel concept and there was a limited number of experts on epistemic trust, attachment and mentalizing available in the world. A larger number of participants in the Delphi study might have provided more credibility to the definition of epistemic trust. Also, because of practical issues, we chose an online survey program, which may have limited opportunities for more active and personal engagement in the interactive discussion. Still, the Delphi methodology offers a practical and cost-effective approach to this problem. Delphi research relies on level III evidence, though it is recognized as an excellent starting point for further scientific inquiry (Wollersheim, 2009).

The validation of the QET represented just one study, although in different clinical settings and a community setting. Further testing in larger and different samples and cultures is warranted to confirm the factor structure and other psychometric properties of the QET. A more important limitation is the lack of validation instruments that are conceptually closely related to our measure. Unfortunately, the Epistemic Trust, Mistrust, and Credulity Questionnaire (ETMCQ) was not yet available when we initiated this project. We found significant correlations between epistemic trust and theoretically linked concepts like attachment, reflective functioning, and personality pathology, but it remains unclear what these correlations exactly signify. Future research should also include aspects like general interpersonal trust (OECD, 2017) or suspiciousness to study conceptual overlap with epistemic trust. Furthermore, self-report questionnaires were used to assess epistemic trust and PD, making responses susceptible to various forms of biases, such as desirability and limited self-awareness (Silva et al., 2016). This may have contributed to reporting bias which caused PD diagnoses to be missed or over-reported. Subsequently, findings on childhood maltreatment relied entirely on retrospective self-reports, which might result in recall bias (Scott et al., 2012) and could be affected by personality or actual functioning. The Childhood Trauma Questionnaire has been found to be valid however, and no significant difference was found in a comparative study between prospective and

retrospective self-reports of childhood maltreatment (Kessler et al., 2000). Additionally, we used the McLean Screening Instrument for BPD as a self-report measure for features of BPD in the mediation analysis. While this may limit the scope of psychopathological outcomes of the trauma-EM pathway, it has also been argued that BPD rather represents a general factor of severity of personality pathology instead or merely a specific type (Sharp et al., 2015). This may justify the generalization of the current findings beyond BPD, as BPD may capture the more common core components of PDs. In general, a problem with our measures is that epistemic trust, attachment and mentalizing are still difficult to measure. The question is how specific our instruments are and how much they really capture the concepts we want to measure (Müller et al., 2022), or whether they are general measures of psychopathology and therefore overlap greatly. Finally, the use of mediation analysis on cross-sectional data has been questioned (Maxwell et al., 2011) and the mediation analysis did not consider other possible moderators on personality functioning, such as social determinants of mental health like socioeconomic status or growing up in a different culture (Allen et al., 2014).

However, this thesis also has some notable strengths. It is the first study that presents data on an epistemic trust measure and the relationship between childhood trauma, attachment, mentalizing, and epistemic trust in clinical samples. Moreover, it also addresses this issue in a very specific, hard-to-reach sample of patients suffering from very severe PDs. We believe it is a major strength that we had access to both patients suffering from very severe PD wherein insecure attachment, problematic mentalizing, and epistemic mistrust are highly prevalent, and patients with less severe psychopathology like anxiety disorders. Also, we want to highlight that we found similar factor structures in both clinical and community samples and that most investigated associations followed the a priori hypotheses. Finally, this is the first study investigating the relationship between epistemic trust and (specific types of) PDs, the level of personality functioning, and the potential of epistemic trust to differentiate between diagnostic groups. Our findings that epistemic trust can discriminate between levels of psychopathology and epistemic trust's compelling relation to the severity of psychopathology and through that with treatment outcome, may have incremental clinical value in developing a more personalized and differentiated treatment allocation.

Future research

Though this thesis may form a first step in corroborating the theory of epistemic trust, future research is still needed to substantiate our hypothesis that epistemic trust may have the potential to guide differential treatment assignment and to predict treatment outcome. Although the relations we found between epistemic trust and severity of pathology and the treatment alliance may provide a possible tentative indication for the potential of epistemic trust to predict outcome, the evidence is still circumstantial, and this cannot be concluded from our data. Providing an empirical measure of epistemic trust opens ways for new research. Future prospective studies should test whether epistemic mistrust is predictive of outcome in preferably large treatment studies on outcome. Furthermore, future testing of the QET with the ETMCQ could further enhance validity of the QET and further testing in larger and different samples and cultures is warranted to confirm the structure and other psychometric properties of the QET. In addition, future research should also include aspects like general interpersonal trust (OECD, 2017) or suspiciousness to study conceptual overlap. Future studies should also include the patient's social environment. There is a need for outcome variables that go beyond symptom reduction, like assessing change in areas such as loneliness/epistemic isolation, social learning, and generalization of epistemic trust to extra-therapeutic relationships. Future research into which epistemic trust-related patient factors may lead to sustained changes in epistemic trust is needed, as well as what interventions in what stage and context of therapy should occur (Folmo et al., 2019). For example, by using process research (e.g., based on video recordings or transcripts) to evaluate the quality and appropriateness of epistemic trust -facilitating interventions or the development of techniques that are specifically designed to address epistemic mistrust. There is a clinical need to identify what specific interventions lead to sustained changes in epistemic trust as well in therapy as in the wider context. Next to the design of interventions to specifically address epistemic mistrust, there is a need for 'system-level' interventions that are effective in addressing the problems in the often 'non-mentalizing' social environments our patients, in order to be able to expand the gains made in treatment and for true change to occur in interpersonal relationships in everyday life. Finally, future research should seek evidence on whether the process of generating epistemic trust is a shared mechanism of change and whether restored epistemic trust is a generic outcome in psychotherapy, regardless of therapeutic orientation.

Clinical Use

Our findings may corroborate a model articulating that early and complex childhood trauma may predispose individuals to become epistemically distrustful, but the role of epistemic trust may be less central than assumed. Still, our findings that epistemic trust can discriminate between levels of psychopathology and epistemic trust's compelling relation to the severity of psychopathology and through that with treatment outcome, may have incremental clinical value in developing a more personalized and differentiated treatment allocation. A recent comprehensive review of the theory of epistemic trust concludes there is preliminary evidence for the association between restoring epistemic trust and the effectiveness of psychotherapy (Li et al., 2023). This should be confirmed in future studies. We believe that the QET may have clinical utility in addition to existing instruments. Compared to the instruments designed for assessing working alliance, the QET may be able to predict potential alliance problems prior to the establishment of a therapeutic alliance. A poor score on the QET may indicate that very sensitive and authentic action must be taken within future therapeutic relationships and that it may be better to assign to treatment programs in which reducing epistemic mistrust (and credulity) is the main starting point of the treatment. This would allow a more personalized approach to treatment assignment and to tailoring specific needs for treatment to the specific characteristics of the patient. As a trait-like disposition, epistemic trust may be relevant to investigate in any person applying for psychosocial interventions that depend on trust in others. For example, the effectiveness of various other treatments, like pharmacotherapy, diabetes treatment, dietary advice for overweight or social interventions like advice on childcare, may all be contingent on the openness to learn from others.

CONCLUSION

This thesis may have added value and merit to the field of personality pathology and caries the potential to form a first effort in 'unraveling' the concept of epistemic trust. We have provided an expert-based definition of epistemic trust and the clinical features of epistemic trust. Among the experts there was agreement that epistemic trust is a trait-like disposition that is rather stable over time, which implies that epistemic trust is accessible for measurement. We designed a brief and easy-to-use instrument to assess epistemic trust that may be useful for clinical and research

purposes. The QET shows meaningful associations with related constructs like attachment, reflective functioning, personality functioning, symptom distress, quality of life and therapeutic alliance. QET scores distinguished clearly between different clinical and community samples. Several of our findings are in line with current psychodynamic theories and support previous findings regarding the hypothesized associations between epistemic trust, attachment and mentalizing (Fonagy & Allison, 2014; Fonagy et al., 2015; Fonagy et al., 2017; Luyten et al., 2020). The relevance of epistemic trust in the mediation between childhood adversity and PDs though seems smaller than assumed by recent theories. The constructs of attachment, mentalizing and epistemic trust might be so strongly intertwined, that they can't be clearly distinguished. It is questionable how well they can be measured and how much available instruments really capture the concepts we want to measure, or whether they are general measures of psychopathology and therefore overlap greatly. The additional value of epistemic trust compared to attachment theory or mentalizing alone therefore stays somewhat unclear.

Although our results cannot be interpreted as evidence, they may suggest that the level of epistemic trust may be able to discriminate according to severity and may therefore have a function in treatment allocation. Future prospective studies to test the potential predictive value of epistemic trust are needed.

Because of the context-dependent characteristic of epistemic trust, it is of equal importance to pay equal attention to the wider context around a patient. Both the clinical and the social surroundings of a patient have the potential to foster epistemic trust. Therefore, it would appear just as important to address the worlds of our patients in and outside of treatment. Aiming to elicit epistemic trust gives direction to how you organize treatment, from the intake process to the degree and way of holding environment you provide and the furnishing of the office. Outside treatment it emphasizes the importance of a benign social environment in order to be able to expand the gains made in treatment and for true change to occur in interpersonal relationships in everyday life. Not just the insights and techniques acquired through treatment are key to success, but also, and perhaps primarily, psychological interventions may need to also intervene at the level of the social environment. The

quality of the social environment around a patient may therefore be an equal important factor as patient characteristics in making change possible.

Finally, the theory of epistemic trust may provide us with a better understanding of initially difficult-to-understand behavior, like Sanne's described in the general introduction, as adaptive to (early) aversive environments. This is true for both individuals as well as society. From Sanne's perspective, her behavior made sense. It was entirely understandable to close herself off from the negligent, hostile and abusive caregivers in her environment. They couldn't be trusted to be a reliable source of information. Seeing behavior in a new light helps us to respond differently and reframe our understanding of childhood trauma. This way we can develop more effective approaches that promote resilience and recovery and help build trusting relationships and create opportunities to adapt in new ways.

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A

Appendices

A Constructed definition of epistemic trust and epistemic mistrust constructed based on researchers' interpretation of the available theory and clinical viewpoint, round 1.

B Revised definition of epistemic trust and mistrust based on feedback and addition of experts, round 2.

C Definition Epistemic Trust based on expert consensus

Summary

Samenvatting

Dankwoord

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Appendix A

Constructed definition of epistemic trust and mistrust, constructed based on researchers' interpretation of the available theory and clinical viewpoint, round 1.

1. General Definition. Epistemic trust refers to the disposition of a person to accept and trust that the information of other persons is authentic, trustworthy, generalizable and relevant to the self.
2. Expression Epistemic Trust. This disposition will express itself in: 1) appropriate perceptions and interpretations of the intentions of others as being trustworthy, enabling the transmission of trustworthy information; 2) basic cognitions about other people as being genuinely interested and as being generally trustworthy; 3) basic affects of safeness and trust in social interactions, and 4) behaviour expressing collaboration and openness to the information and expertise of others.
3. Continuum. This disposition can be understood as a bipolar continuum, ranging from maladaptive expressions of being overly trustful and open to social information over adaptive expressions of balancing trust and appropriate alertness/vigilance with regard to potential misinformation to maladaptive expressions of deep mistrust in other people's intensions and information.
4. Expression Epistemic Mistrust. Epistemic mistrust therefore will be expressed generally in: 1) a tendency to misinterpret intentions of others as being malevolent; 2) basic cognitions about others as being unreliable and potentially harmful; 3) basic (interpersonal) affects of feeling unsafe and fearful in interpersonal contacts, and 4) behaviour that interferes with appropriate collaboration, for example as expressed in a defensive and hostile interpersonal stance.
5. Context. This disposition (epistemic trust – mistrust) will be activated in interpersonal contexts in which information is delivered and may enable or interfere with opportunities of persons to learn socially from other people.
6. Ontogenetic. Ontogenetically, the development of this disposition will be largely determined by the experienced safety in early attachment relationships with caregivers and as such these experiences may dispose a person to generally (mis)trust

others as potential and reliable sources of information. Once established, epistemic (mis)trust behaves as a rather stable personality trait, which may be activated in interpersonal contact when ostensive cues sign the potential delivery of social information.

7. Effect Epistemic Trust/Mistrust. Being sufficiently epistemic trustful enables a person to benefit from knowledge transmitted through interpersonal contact to improve personal and flexible adaptation. Epistemic mistrust on the other hand may interfere with accepting and trusting knowledge from others, preventing change to occur. Therefore, epistemic mistrust may interfere with any professional relationship, in which help is offered through transmitting knowledge in a social context.

Appendix B

Revised definition of epistemic trust and epistemic mistrust based on feedback and addition of experts, round 2 (revisions and additions in cursive).

1. General definition. Epistemic trust refers to the disposition of a person to accept and trust that the information of other persons is authentic, trustworthy, generalizable and relevant to the self.

2. Expression Epistemic Trust.

This disposition will express itself in

1) Sensitivity to ostensive cues and appropriate perceptions and interpretations of the intentions of others as being trustworthy in enabling the transmission of social information,
2) basic cognitions about other people as being genuinely competent and trustworthy,
3) basic affects of safety, curiosity to information and trust in social interactions,
4) behaviour expressing collaboration and openness to the information and expertise of others.

3. Continuum. This trait-like disposition can be understood as a bipolar continuum. It may range between

- maladaptive expressions of being overly trustful and open to social information, to
- adaptive expressions of balancing trust and appropriate alertness/vigilance with regard to potential misinformation, to
- a tendency to misinterpret intentions of others as being malevolent and therefore their social information as being irrelevant.

In general, "Epistemically Healthy" individuals will be able to adaptively reposition themselves on the continuum in response to the social environment and behaviours of others.

4. Expression Epistemic Mistrust. Epistemic mistrust therefore will be expressed generally in

1) a tendency to misinterpret social information (e.g. ostensive cues) of others as being malevolent, irrelevant and/or not generalizable to their own situation,
2) basic cognitions about others as being unreliable and potentially harmful,
3) basic (interpersonal) affects of feeling unsafe and fearful in interpersonal contacts and new social situations,
4) behaviour that interferes with appropriate collaboration, for example as expressed in a defensive and hostile interpersonal stance, or in a "blank" indifferent stance.

5. Context. This disposition (epistemic trust – mistrust) will be activated in interpersonal contexts in which information is delivered and may enable or interfere with opportunities of persons to learn socially from other people.

6. Ontogenetic (DELETED).

7. Effect Epistemic Trust/Mistrust. Being sufficiently epistemic trustful enables a person to benefit from knowledge transmitted through interpersonal contact to improve personal and flexible adaptation. Epistemic mistrust on the other hand may interfere with accepting and trusting knowledge from others, preventing change to occur. Therefore, epistemic mistrust may interfere with any (professional) relationship, in which help is offered through transmitting knowledge in a social context.

Appendix C

Definition epistemic trust based on expert consensus

1. Epistemic trust refers to the predisposition of a person to accept and trust that the information of other persons is authentic, trustworthy, generalizable and relevant to the self.

2. This predisposition is characterized by a certain tendency to perceive, think, feel and behave in a certain way in specific situations, especially in situations where the attachment system is activated, and will express itself in

a) Sensitivity to ostensive cues and appropriate perceptions and interpretations of the intentions of others as being trustworthy in enabling the transmission of social information,
b) basic cognitions about other people as being genuinely competent and trustworthy,
c) basic affects of safety, curiosity to information and trust in social interactions,
d) behaviour expressing collaboration and openness to the information and expertise of others,

3. This predisposition can be understood as a bipolar continuum. It may
range between
1. Maladaptive expressions of being overly trustful and open to social information, to
2. Adaptive expressions of balancing trust and appropriate alertness/vigilance with regard to potential misinformation, to
3. a tendency to misinterpret intentions of others as being malevolent and therefore their social information as being irrelevant.
In general, “Epistemically Healthy” individuals will be able to adaptively reposition themselves on the continuum in response to the social environment and behaviours of others.

4. Epistemic mistrust therefore will be expressed generally in
a) a tendency to misinterpret social information (e.g. ostensive cues) of others as being malevolent, irrelevant and/or not generalizable to their own situation,
b) basic cognitions about others as being unreliable and potentially harmful,
c) basic (interpersonal) affects of feeling unsafe and fearful in interpersonal contacts and new social situations,
d) behaviour that interferes with appropriate collaboration, for example as expressed in a defensive and hostile interpersonal stance, or in a "blank" indifferent stance.
These expressions are especially evident in situations where the attachment system is activated

5. This predisposition (epistemic trust – mistrust) will especially be activated in interpersonal contexts where the attachment system is activated and in which information is delivered. It therefore may predict to what extend someone will accept social information from others and may thus enable -or interfere with opportunities of persons -to learn socially from other people.

6. Being sufficiently epistemic trustful enables a person to benefit from knowledge transmitted through interpersonal contact to improve personal and flexible adaptation. Epistemic mistrust on the other hand may interfere with accepting and trusting knowledge from others, preventing change to occur. Therefore, epistemic mistrust may interfere with any (professional) relationship, in which help is offered through transmitting knowledge in a social context.

Summary

This thesis presents the results of our attempt to unravel the, at the start of this project, still mainly theoretical concept of epistemic trust (ET). ET is rooted in developmental psychopathology and attachment theory and refers to the capacity to consider conveyed knowledge as trustworthy, relevant to the self, and generalizable to other contexts. The theory of ET proposes that early negative childhood experiences may not only lead to attachment insecurity and impaired mentalizing but may also dispose an individual to adopt a rigid and pervasive hypervigilant position toward information coming from others, resulting in high levels of epistemic mistrust (EM). Although ET contains as well dispositional as state-like aspects and is supposed to be context-dependent, this mistrust may become a rather stable personality feature, defining the more general tendency of a person to be open or closed off towards (social) information from others. Childhood adversity is thus thought to create long-term disruptions in the capacity to adapt by compromising social learning leading to an (implicit) attitude of mistrust in the social environment. This disposition of EM is believed to increase the risk of developing psychopathology and might explain the profound rigidity and the 'hard to reach' character of patients with severe psychopathology. Although the concept of ET is essentially transdiagnostic, a more intrinsic relationship between epistemic mistrust and the development of personality disorders (PDs), more specifically Borderline PDs (BPD), is assumed. From this perspective, (B)PDs are conceptualized as a failure of communication arising from an impaired capacity to learn from others. Figure 1 shows a model of the supposed relationship between childhood trauma, epistemic trust, attachment, mentalization and (B)PD.

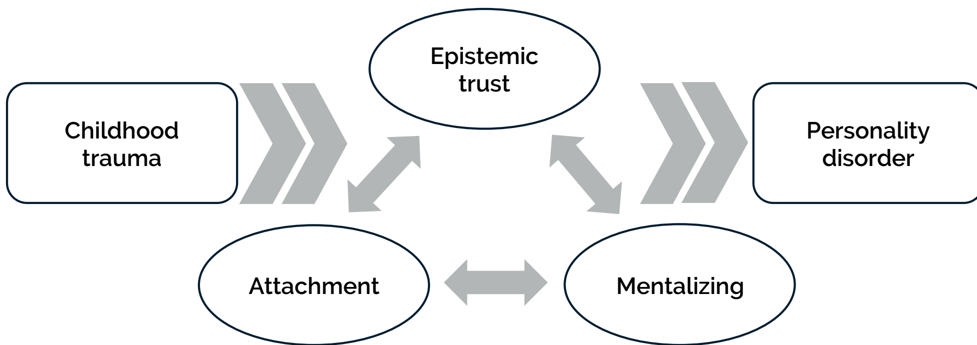

Figure 1 Supposed relationship between childhood trauma, epistemic trust, attachment, mentalizing and (borderline) personality disorder.

Although ET is assumed to be theoretically associated with attachment and mentalizing, it has been argued that it provides additional comprehensive value to explain the onset and continuation of mental health problems because of reduced resilience in later life due to EM. **Chapter 1** provides a comprehensive explanation of the concept of ET and its supposed relations with attachment, mentalizing and (notably personality) psychopathology.

The theory of ET has gained wide acceptance and support in the field and offers promising opportunities for clinical intervention. In **Chapter 2** we describe the conceptual foundations of this thesis by identifying ET as a common final pathway through which adversity leads to mental health problems. We hypothesize that epistemic mistrust also affects the therapeutic encounter, thereby reducing the ability to benefit from treatment and therefore ET may act as a psycho-marker to predict the outcome of psychosocial interventions. If ET acts as a potential psycho-marker, it should be made accessible for clinical assessment prior to treatment.
Additionally, there is still a lack of empirical evidence to substantiate the theoretical assumed model of ET. At the start of this thesis project, there were no means to measure epistemic trust and no empirical studies had been done to substantiate the theoretically assumed model. Concurrently with this thesis, studies with the recently developed Epistemic Trust, Mistrust, Credulity Questionnaire (ETMCQ) showed meaningful associations in community samples between ET, EM and Credulity on the one hand and childhood adversity and a global psychopathology severity index on the

other hand. Both factors mediated between childhood adversity and mental health symptoms and were positively associated with lower mentalizing and insecure attachment styles. However, a limitation of both studies is that they were conducted in community samples and therefore did not include a sample in which pathogenic levels of epistemic mistrust, insecure attachment and impaired mentalizing can be assumed. Furthermore, the possible mediating role of attachment and mentalizing between childhood adversity and psychopathology was not investigated. Another study, again only in a community sample, found that ET and personality functioning relevantly mediated between childhood adversity and posttraumatic stress disorder, but the role of attachment and mentalizing in the mediation was not investigated. Only very recently a comprehensive review of 15 studies that investigated the relationship between epistemic trust, psychopathology, and psychotherapy, concluded that there is preliminary evidence for the theoretical assumption of epistemic trust. However, as stated none of this was available at the start of this thesis project.

The general aim of this thesis was therefore to clarify the concept of ET and to make ET assessable by developing and validating a clinically feasible measurement instrument to generate empirical support for the basic theoretical assumptions about epistemic trust and childhood adversity, attachment, mentalizing, and personality pathology. This first required an operational definition of the rather abstract concept of ET, which we provide in **Chapter 3**. In a Delphi study with international experts, who were clinically and/or scientifically active in the field of personality disorders, mentalization, and epistemic trust, we reached consensus on the definition and clinical features of ET. The next step was the development of an instrument assessing ET that is feasible to administer in large scale studies in order to empirically test the theoretically presumed assumptions about ET.

The development and validation of this instrument is described in **Chapter 4**. Based on the definition of ET, we drafted a range of clinical features and related items for assessing ET. These items were presented for feedback to the same group of experts, again following a Delphi-procedure, which led to the original version of the Questionnaire Epistemic Trust (QET) that consisted of 49 items. Items concerned statements about trust and mistrust and were to be rated on a 5-point Likert scale

varying from 1 (totally agree) to 5 (totally disagree). To achieve a brief and easy-to-use instrument that may be useful for clinical and research purposes in line with our general aims, we subsequently reduced the number of items to 24. This became the final version of the QET which was used for all further analyses in this dissertation. Our findings showed good to excellent internal consistency for the total scale and each of the four subscales of the QET. The results of the Confirmatory Factor Analysis of the 24 item QET in a clinical and a community sample indicated an acceptable model fit. Our results further showed that all four scales were associated in a clinically meaningful way with a range of conceptually related variables, like severity of personality problems and level of general psychopathology, supporting the construct validity of the instrument. Moreover, the QET was positively associated with the quality of the working alliance and was able to significantly distinguish between a clinical sample and a community sample. Measurement invariance was demonstrated. All these findings were supportive of the QET as a promising, brief, and user-friendly instrument that could be used for a range of clinical and research purposes.

In further investigating the theoretical assumptions derived from the model of epistemic trust, we focused first on the supposed interplay between epistemic trust and personality disorders and severity of pathology. **Chapter 5** describes the degree of ET in different clinical and a community samples and explores the assumed association between ET, PDs, and the severity of PDs. As expected, we found that impairments in epistemic trust are more pronounced in patients meeting criteria for PD compared to patients meeting criteria for anxiety disorder, in whom epistemic trust was in turn lower than in subjects the community. This supports the assumed dimensional nature of personality impairments across different types of mental disorders and is also in line with the assumed transdiagnostic features of epistemic trust. Looking at the relations of epistemic trust with severity of personality disorders, we found strong associations between epistemic trust and the number of PD diagnoses and total (B)PD criteria, which are considered as main indicators of severity in PDs. When looking more specifically into the type of PD, we found, as expected, moderate relations between epistemic trust and borderline PD, however we also found substantial associations with paranoid and avoidant PD. This may be in line with findings stressing that comorbid avoidant and paranoid features are associated with

increased complexity and are predictive of poor prognosis in patients with BPD. These findings thus confirm on the one hand the transdiagnostic and dimensional nature of epistemic trust but could also suggest that specific types of interpersonal impairments – beyond BPD – may be more specifically associated with a lack of epistemic trust. Subsequently in **Chapter 6**, we examined the relationship between ET and conceptually related concepts such as attachment and mentalizing, as well as the mediating role of attachment, mentalizing and epistemic trust in the association between childhood adversity and BPD. As expected, we found strong relationships between epistemic trust and attachment avoidance and anxiety, and mentalizing indicating that lower degrees of epistemic trust are associated with insecure attachment and lower reflective functioning. Based upon recent theories stressing the role of epistemic trust as a proximal and more specific transdiagnostic feature related notably to borderline personality disorder (BPD), we were specifically interested in the mediating role of epistemic trust between childhood adversity and symptoms of BPD in addition to the mediating role of attachment and mentalizing. We expected epistemic trust to play the largest part in the mediation. Surprisingly, we found that epistemic trust only accounted for 17% of the mediation, whereas attachment anxiety and uncertainty about mental states (hypomentalizing) accounted for the largest part of the mediation, respectively 22 and 42%. This contradicted our hypothesis that epistemic trust would be the most important factor. An explanation to this may be related to problems with the measures we used to assess mentalizing and attachment. Other studies found strong associations between both the RFQ and attachment anxiety and measures of personality pathology. There could be a lack of distinctiveness of our measure of attachment and mentalizing on the one hand and features of BPD on the other hand. As these measures may be conceptually strongly related, they may therefore 'consume' the largest share of the mediation. This may be supported by the high intercorrelations we found between hypomentalizing, attachment and BPD features in our study, which could suggest that they are largely intertwined and may not be easily distinguished. Also, our measure of ET was more strongly associated with attachment avoidance whereas a meta-analysis showed that attachment avoidance showed less associations with mental health outcomes than attachment anxiety. Therefore, another explanation could be that epistemic mistrust is mainly related to an avoidant relational style, which is less 'predictive' of the emotional dysregulation that is

usually more characteristic of symptom presentations of patients with BPD but may be predictive of problems in the therapeutic alliance. Other studies found that especially epistemic mistrust plays an essential role in maladaptive psychological functioning though. Although our study did not support a strong role for ET in the association between trauma and BPD, we cannot rule out the possibility that ET has a stronger mediational role or predictive value for other outcomes. We argued in **Chapter 2** that EM may interfere with establishing an effective therapeutic alliance and in this way may exert its influence on treatment outcome. If ET has the potential to predict future therapeutic alliance and through that outcome, it could have incremental value over attachment alone, but this is still open for future investigation

Conclusions and implications for clinical practice

In **Chapter 7** the findings discussed above are summarized and discussed. The findings of this thesis may corroborate a model articulating that early and complex childhood trauma may predispose individuals to become epistemically distrustful, but the role of ET may be less central than assumed. Still, our findings that ET can discriminate between levels of psychopathology and ET's compelling relation to the severity of psychopathology and through that with treatment outcome, may have incremental clinical value in developing a more personalized and differentiated treatment allocation. A very recent comprehensive review of the theory of ET concludes there is preliminary evidence for the association between restoring epistemic trust and the effectiveness of psychotherapy. This should be confirmed in future studies. We believe that the QET may have clinical utility in addition to existing instruments. Compared to the instruments designed for assessing working alliance, the QET may be able to predict potential alliance problems prior to the establishment of a therapeutic alliance. A poor score on the QET may indicate that very sensitive and authentic action must be taken within future therapeutic relationships and that it may be better to assign to treatment programs in which reducing epistemic mistrust (and credulity) is the main starting point of the treatment. This would allow a more personalized approach to treatment assignment and to tailoring specific needs for treatment to the specific characteristics of the patient. Although the current findings cannot be interpreted as evidence, as a trait-like disposition, epistemic trust may be relevant to investigate in any person applying for psychosocial interventions that

depend on trust in others. For example, the effectiveness of various other treatments, like pharmacotherapy, diabetes treatment, dietary advice for overweight or social interventions like advice on childcare, may all be contingent on the openness to learn from others.

Epistemic mistrust may interfere with establishing an emotionally close and genuine therapeutic relationship and thereby may have the potential to influence the outcome of interventions. This underlines the importance of the therapeutic alliance in making interventions effective, especially in patients suffering from more severe PD.
Rekindling epistemic trust may therefore be an important goal within all psychological treatments. The context in which epistemic trust may be re-established is not restricted to the therapeutic relationship only though. Positive, trust-affirming relational experiences in the patient's own wider context beyond therapy may be even more crucial in facilitating the establishment of epistemic trust. Not only a good therapeutic bond but also stronger social support outside therapy predicts successful treatment outcomes. A range of positive human relationships, especially in an environment characterized by benign and secure attachment relationships, can generate ET and trigger a capacity for social learning. This emphasizes the importance of intervening in the social world directly which goes far beyond psychotherapy alone.

Beyond the clinical arena, epistemic trust may have value in many fields, for example in explaining some contemporary sociocultural dynamics, such as belief in conspiracy theories and fake news, and vaccine hesitancy. Maladaptive response patterns to pandemic restrictions, conspiracy thinking in general, conspiracy thinking about COVID-19, vaccine hesitancy in general, and COVID-19 vaccination hesitancy, were all found to be related to dysfunctional personality traits, immature defense mechanisms, poor mentalizing, and epistemic mistrust or credulity. This argues for mitigation strategies that address both mistrust, credulity, and misinformation processing, with interventions for individuals, institutions of authority, and society as a whole. The theory of epistemic trust might provide a useful framework in understanding and addressing these problems.
Finally, the theory of epistemic trust may provide us with a better understanding of initially difficult-to-understand behavior, both for individuals as well as in society.

Seeing behavior in a new light helps us to respond differently and reframe our understanding of childhood trauma. This way we can develop more effective approaches that promote resilience and recovery and help build trusting relationships and create opportunities to adapt in new ways.

Questionnaire Epistemic Trust

(S. Knapen, A. Beekman & J. Hutsebaut)

This questionnaire consists of a number of statements.
Indicate for each statement to what extent you agree with this statement.
This can be done on a scale ranging from 1 (completely disagree) to 5 (completely agree).

Some statements are about the extent to which something applies to you in general, while others are specifically about a treatment setting. When asked about a practitioner, you can keep in mind your practitioner at this moment but if you do not have a practitioner (yet), you can also keep in mind another practitioner (for example your GP or a previous practitioner or a physiotherapist).

		1 Fully disagree	2 Disagree	3 Neutral	4 Agree	5 Fully agree
1	I am easily suspicious that information from most people cannot be trusted.	O	O	O	O	O
2	I easily doubt other people's intentions when they give me advice.	O	O	O	O	O
3	I tend to be cautious when people try to teach me something.	O	O	O	O	O
4	I have to be cautious to protect myself from misleading information.	O	O	O	O	O
5	I feel cautious in accepting information from others.	O	O	O	O	O
6	I get suspicious about why someone wants to teach me something.	O	O	O	O	O
7	I feel open to accepting information from others.	O	O	O	O	O
8	I am generally curious about things other people know about.	O	O	O	O	O
9	I ask questions when I don't understand something.	O	O	O	O	O
10	Advice or tips from my therapist usually do not work for me.	O	O	O	O	O
11	In treatment, I tend to be cautious to protect myself from misleading information.	O	O	O	O	O
12	I generally think that what my therapist is communicating to me is useless for me.	O	O	O	O	O
13	I quickly doubt information from my therapist.	O	O	O	O	O
14	I expect that the advice from this therapist will help me.	O	O	O	O	O
15	My therapist helps me consider ideas that would never have occurred to me on my own.	O	O	O	O	O
16	Tips or advice that my therapist gives me might help for others, but not for me.	O	O	O	O	O

17	My therapist provides me with valuable information and tips.	O	O	O	O	O
18	I feel cautious about accepting information from my therapist.	O	O	O	O	O
19	I am afraid to accept what my therapist advises me to do.	O	O	O	O	O
20	I feel cautious when my therapist tries to teach me something.	O	O	O	O	O
21	I feel open to accept information from my therapist.	O	O	O	O	O
22	I am generally curious to tips or advice from my therapist.	O	O	O	O	O
23	I am interested in what my therapist can teach me.	O	O	O	O	O
24	I am highly selective in what information from my therapist I trust.	O	O	O	O	O

Scoring and norm scores

Before calculating the total QET score, the following items need to be recoded: 1, 2, 3, 4, 5, 6, 10, 11, 12, 13, 16, 18, 19, 20 en 24.
The total QET score is calculated by summing all items. A high score indicates morel Epistemic Trust.

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Normscores Total

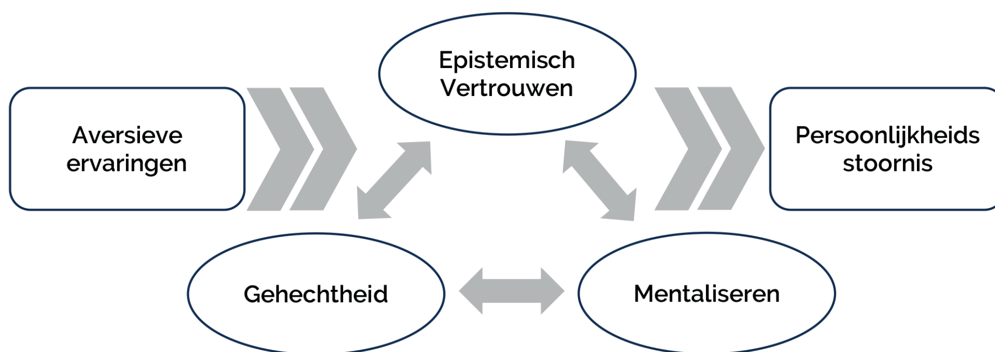
	Mean	Sd
Severe Personality Disorder	86,6	13,6
Anxiety Disorder (without trauma)	94,0	11,5
Community sample	99,9	10,4

Items per subscale

Items 1 through 6	Hypervigilance
Items 7, 8, 9, 21, 22, 23	Curiosity/openness
Items 10, 12, 14 through 17	Experience/expectation of help
Items 11, 13, 18, 19, 20 en 24	Openness to help/treatment

Samenvatting

Dit proefschrift presenteert de resultaten van onze poging om het, aan het begin van dit project, nog voornamelijk theoretische concept van epistemisch vertrouwen (EV) te ontrafelen. EV is geworteld in de ontwikkelings-psychopathologie en hechtingstheorie en verwijst naar het vermogen om overgebrachte kennis als betrouwbaar, relevant voor het zelf en generaliseerbaar naar andere contexten te beschouwen. De theorie van EV stelt dat vroege negatieve ervaringen uit de kindertijd niet alleen kunnen leiden tot onveilige gehechtheid en problemen met mentaliseren, maar ook tot een rigide en hypervigilante houding ten opzichte van informatie van anderen, wat resulteert in een hoge mate van epistemisch wantrouwen (EW). Hoewel EV wordt verondersteld te worden bepaald door zowel dispositie als het toestandsbeeld op een bepaald moment, kan epistemisch wantrouwen een vrij stabiel persoonlijkheidskenmerk worden, dat de meer algemene neiging van een persoon definieert om open of gesloten te zijn voor (sociale) informatie van anderen. Aversieve ervaringen in de kindertijd worden dus verondersteld langdurige verstoringen in het aanpassingsvermogen te veroorzaken door beperkingen in het sociale leren, wat leidt tot een (impliciete) houding van wantrouwen in de sociale omgeving. Deze dispositie van EW wordt verondersteld het risico op het ontwikkelen van psychopathologie te verhogen en zou de diepe rigiditeit en het 'moeilijk bereikbare' karakter van patiënten met ernstige psychopathologie kunnen verklaren. Hoewel het concept van EV in wezen transdiagnostisch is, wordt een meer intrinsieke relatie tussen epistemisch wantrouwen en de ontwikkeling van persoonlijkheidsstoornissen (PS), en dan vooral de Borderline PS (BPS), verondersteld. Vanuit dit perspectief worden (B)PS geconceptualiseerd als een gebrekkige communicatie als gevolg van een verminderd vermogen om van anderen te leren. Figuur 1 toont een model van de vermeende relatie tussen vroegkinderlijk trauma, epistemisch vertrouwen, gehechtheid, mentaliseren en (B)PS.



Figuur 1 Veronderstelde relatie tussen vroegkinderlijk trauma, epistemisch vertrouwen, gehechtheid, mentaliseren en (borderline) persoonlijkheidsstoornis.

Hoewel wordt aangenomen dat EV theoretisch geassocieerd is met gehechtheid en mentaliseren, wordt er verondersteld dat EV een extra toegevoegde waarde biedt om het ontstaan en het beloop van psychische problemen te verklaren als gevolg van verminderde veerkracht op latere leeftijd als gevolg van EW. **Hoofdstuk 1** geeft een uitgebreide uitleg van het concept van EV en de veronderstelde relaties met gehechtheid, mentaliseren en (met name persoonlijkheids) psychopathologie.

De theorie van EV heeft brede acceptatie en steun gekregen in het veld en biedt veelbelovende mogelijkheden voor klinische interventie. In **hoofdstuk 2** beschrijven we de conceptuele grondslagen van dit proefschrift door EV te identificeren als een gemeenschappelijk eindpad waarlangs tegenspoed leidt tot psychische problemen. Onze hypothese is dat epistemisch wantrouwen ook van invloed is op de therapeutische ontmoeting, waardoor het vermogen om te profiteren van de behandeling wordt verminderd en daarom kan EV fungeren als een psychomarker om de uitkomst van psychosociale interventies te voorspellen. Als EV als een potentiële psychomarker fungeert, is het nuttig het voorafgaand aan de behandeling te kunnen meten voor klinische beoordeling.

Daarnaast is er nog steeds een gebrek aan empirisch bewijs om het theoretisch veronderstelde model van EV te onderbouwen. Bij de start van dit proefschrift waren

er geen middelen om epistemisch vertrouwen te meten en waren er geen empirische studies gedaan om het theoretisch aangenomen model te onderbouwen. Gelijktijdig met dit proefschrift toonden studies met de recent ontwikkelde Epistemic Trust, Mistrust, Credulity Questionnaire (ETMCQ) betekenisvolle associaties in gemeenschapssteekproeven tussen EV, EM en goedgelovigheid aan de ene kant en aversieve ervaringen in de kindertijd en een wereldwijde psychopathologie-ernstindex aan de andere kant. Beide factoren bemiddelden tussen tegenspoed in de kindertijd en psychische symptomen en waren positief geassocieerd met lagere mentaliserende en onveilige hechtingsstijlen. Een beperking van beide onderzoeken is echter dat ze enkel werden uitgevoerd in gemeenschapssteekproeven en daarom geen steekproef bevatten waarin pathogene niveaus van epistemisch wantrouwen, onveilige gehechtheid en verminderd mentaliseren kunnen worden verondersteld. Verder werd de mogelijke bemiddelende rol van hechting en mentaliseren tussen tegenspoed in de kindertijd en psychopathologie niet onderzocht. Een andere studie, opnieuw alleen in een steekproef van de gemeenschap, vond dat EV en persoonlijkheidsfunctioneren relevant medieerden tussen tegenspoed in de kindertijd en posttraumatische stressstoornis, maar de rol van gehechtheid en mentaliseren in de bemiddeling werd niet onderzocht. Pas zeer recent concludeerde een uitgebreid overzicht van 15 studies die de relatie tussen epistemisch vertrouwen, psychopathologie en psychotherapie onderzochten, dat er voorlopig bewijs is voor de theoretische veronderstelling van epistemisch vertrouwen. Echter, zoals gezegd, was dit allemaal niet beschikbaar bij de start van dit promotieproject.

Het algemene doel van dit proefschrift was dan ook om het concept van EV te verduidelijken en EV beoordeelbaar te maken door het ontwikkelen en valideren van een klinisch haalbaar meetinstrument en om empirische ondersteuning te genereren voor de theoretische basisaannames over epistemisch vertrouwen en aversieve ervaringen in de kindertijd, gehechtheid, mentaliseren en persoonlijkheidspathologie. Dit vereiste eerst een operationele definitie van het nogal abstracte concept van EV, die we in **hoofdstuk 3** geven. In een Delphi-studie met internationale experts, die klinisch en/of wetenschappelijk actief waren op het gebied van persoonlijkheidsstoornissen, mentaliseren en epistemisch vertrouwen, bereikten we consensus over de definitie en klinische kenmerken van EV. De volgende stap was de

ontwikkeling van een instrument dat EV beoordeelt en dat haalbaar is om in grootschalige studies te gebruiken om de theoretisch veronderstelde aannames over EV empirisch te testen.

De ontwikkeling en validering van dit instrument wordt beschreven in **hoofdstuk 4**. Op basis van de definitie van EV hebben we een reeks klinische kenmerken en gerelateerde items opgesteld voor het beoordelen van EV. Deze items werden ter feedback voorgelegd aan dezelfde groep experts, opnieuw volgens een Delphi-procedure, wat leidde tot de oorspronkelijke versie van de Questionnaire Epistemic Trust (QET) die uit 49 items bestond. Items betroffen stellingen over vertrouwen en wantrouwen, en moesten worden beoordeeld op een 5-punts Likertschaal variërend van 1 (helemaal mee eens) tot 5 (helemaal mee oneens). Om tot een beknopt en gebruiksvriendelijk instrument te komen dat nuttig kan zijn voor klinische en onderzoeksdoeleinden in overeenstemming met onze algemene doelstellingen, hebben we vervolgens het aantal items teruggebracht tot 24. Dit werd de definitieve versie van de QET die werd gebruikt voor alle verdere analyses in dit proefschrift. Onze bevindingen toonden een goede tot uitstekende interne consistentie voor de totale schaal en elk van de vier subschalen van de QET.
De resultaten van de confirmatieve factoranalyse van de QET met 24 items in een klinische en een gemeenschapssteekproef gaven een acceptabele modelfit aan. Onze resultaten toonden verder aan dat alle vier de schalen op een klinisch betekenisvolle manier geassocieerd waren met een reeks conceptueel gerelateerde variabelen, zoals de ernst van persoonlijkheidsproblemen en het niveau van algemene psychopathologie, die de constructvaliditeit van het instrument ondersteunden. Bovendien was de QET positief geassocieerd met de kwaliteit van de werkalliantie en was het in staat om significant onderscheid te maken tussen een klinische steekproef en een gemeenschapssteekproef. Meetinvariantie werd aangetoond. Al deze bevindingen ondersteunden de QET als een veelbelovend, kort en gebruiksvriendelijk instrument dat kan worden gebruikt voor een reeks klinische en onderzoeksdoeleinden.

Bij het verder onderzoeken van de theoretische aannames die zijn afgeleid van het model van epistemisch vertrouwen, hebben we ons eerst gericht op de

veronderstelde wisselwerking tussen epistemisch vertrouwen en persoonlijkheidsstoornissen en de ernst van pathologie. **Hoofdstuk 5** beschrijft de mate van EV in verschillende klinische en gemeenschapssteekproeven en onderzoekt de veronderstelde associatie tussen EV, persoonlijkheidsstoornissen (PS) en de ernst van PS. Zoals verwacht ontdekten we dat stoornissen in epistemisch vertrouwen meer uitgesproken zijn bij patiënten die voldoen aan de criteria voor een PS in vergelijking met patiënten die voldoen aan de criteria voor een angststoornis, bij wie het epistemisch vertrouwen op zijn beurt lager was dan bij proefpersonen in de gemeenschap. Dit ondersteunt de veronderstelde dimensionale aard van persoonlijkheidsstoornissen bij verschillende soorten psychische stoornissen en is ook in overeenstemming met de veronderstelde transdiagnostische kenmerken van epistemisch vertrouwen. Kijkend naar de relaties tussen epistemisch vertrouwen en de ernst van persoonlijkheidsstoornissen, vonden we sterke associaties tussen epistemisch vertrouwen en het aantal PS-diagnoses en totale borderline (BPS)-criteria, die worden beschouwd als de belangrijkste indicatoren van de ernst van PS. Toen we meer specifiek naar het type PS keken, vonden we, zoals verwacht relaties tussen epistemisch vertrouwen en borderline PS, maar we vonden ook substantiële associaties met paranoïde en vermijdende PS. Dit kan in overeenstemming zijn met bevindingen die benadrukken dat comorbide vermijdende en paranoïde kenmerken geassocieerd zijn met verhoogde complexiteit en voorspellend zijn voor een slechte prognose bij patiënten met BPS. Deze bevindingen bevestigen dus enerzijds de transdiagnostische en dimensionale aard van epistemisch vertrouwen, maar zouden ook kunnen suggereren dat specifieke soorten interpersoonlijke beperkingen – naast BPS – meer specifiek geassocieerd kunnen zijn met een gebrek aan epistemisch vertrouwen. Vervolgens onderzochten we in **hoofdstuk 6** de relatie tussen EV en conceptueel verwante concepten zoals gehechtheid en mentaliseren, evenals de mediërende rol van gehechtheid, mentaliseren en epistemisch vertrouwen in de associatie tussen aversieve ervaringen in de kindertijd en BPS. Zoals verwacht vonden we sterke relaties tussen epistemisch vertrouwen en vermijdende en angstige gehechtheid en mentaliseren, wat aangeeft dat lagere niveaus van epistemisch vertrouwen geassocieerd zijn met onveilige gehechtheid en lager reflectief functioneren. Op basis van recente theorieën die de rol van epistemisch vertrouwen benadrukken als een proximaal en meer specifiek transdiagnostisch kenmerk dat met

name verband houdt met borderline persoonlijkheidsstoornis (BPS), waren we specifiek geïnteresseerd in de mediërende rol van epistemisch vertrouwen tussen aversieve ervaringen in de kindertijd en symptomen van BPS, naast de mediërende rol van gehechtheid en mentaliseren. We verwachtten dat epistemisch vertrouwen de grootste rol zou spelen in de bemiddeling. Verrassend genoeg ontdekten we dat epistemisch vertrouwen slechts 17% van de bemiddeling uitmaakte, terwijl angstige gehechtheid en onzekerheid over mentale toestanden (hypomentaliseren) het grootste deel van de bemiddeling uitmaakten, respectievelijk 22 en 42%. Dit was in tegenspraak met onze hypothese dat epistemisch vertrouwen de belangrijkste factor zou zijn. Een verklaring hiervoor kan te maken hebben met problemen met de meetinstrumenten die we gebruikten om mentaliseren en gehechtheid te beoordelen. Andere studies vonden sterke associaties tussen zowel de RFQ als angstige gehechtheid en persoonlijkheidspathologie. Er kan een gebrek aan onderscheidend vermogen zijn geweest van onze meetinstrumenten voor gehechtheid en mentaliseren aan de ene kant en kenmerken van BPS aan de andere kant. Aangezien deze maatregelen conceptueel sterk met elkaar verbonden zijn, kunnen zij dus het grootste deel van de bemiddeling "opslokken". Dit kan worden ondersteund door de hoge onderlinge correlaties die we in onze studie hebben gevonden tussen hypomentaliserende, gehechtheids- en BPS-kenmerken. Dit zou kunnen suggereren dat ze grotendeels met elkaar verweven zijn en mogelijk niet gemakkelijk te onderscheiden zijn. Ook was onze meting van EV sterker geassocieerd met een vermijdende gehechtheidsstijl, terwijl een meta-analyse aantoonde dat vermijdende gehechtheid minder associaties vertoonde met psychopathologie dan angstige gehechtheid. Een andere verklaring zou kunnen zijn dat epistemisch wantrouwen vooral te maken heeft met een vermijdende relationele stijl, die minder 'voorspellend' is voor de emotionele ontregeling die meestal meer kenmerkend is patiënten met BPS, maar wel voorspellend kan zijn voor problemen in de therapeutische alliantie. Andere studies toonden echter aan dat vooral epistemisch wantrouwen een essentiële rol speelt bij onaangepast psychologisch functioneren. Hoewel onze studie geen sterke rol voor EV in de associatie tussen trauma en BPS ondersteunde, kunnen we de mogelijkheid niet uitsluiten dat EV een sterkere bemiddelende rol of voorspellende waarde heeft voor andere uitkomsten. In **hoofdstuk 2** hebben we betoogd dat EM de totstandkoming van een effectieve therapeutische alliantie kan verstoren en op deze

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manier invloed kan uitoefenen op het behandelresultaat. Als EV het potentieel heeft om toekomstige therapeutische allianties te voorspellen en daarmee behandeluitkomst, zou het een incrementele waarde kunnen hebben ten opzichte van gehechtheid alleen, maar dit staat nog steeds open voor toekomstig onderzoek.

Conclusies en implicaties voor de klinische praktijk

In **hoofdstuk 7** worden de hierboven genoemde bevindingen samengevat en besproken. De bevindingen van dit proefschrift bevestigen dat vroeg en complex jeugdtrauma individuen vatbaar kan maken om epistemisch wantrouwend te worden, maar de rol van EV lijkt minder centraal te staan dan vooraf aangenomen. Toch kunnen onze bevindingen dat EV onderscheid kan maken tussen niveaus van psychopathologie en de sterke relatie van EV met de ernst van psychopathologie en daarmee met het behandelresultaat, incrementele klinische waarde hebben bij het ontwikkelen van een meer gepersonaliseerde en gedifferentieerde indicatiestelling voor behandeling. Een zeer recent uitgebreid overzicht van de theorie van EV concludeert dat er voorlopig bewijs is voor het verband tussen het herstellen van epistemisch vertrouwen en de effectiviteit van psychotherapie. Dit zou in toekomstige studies moeten worden bevestigd. Wij zijn van mening dat de QET klinisch nut kan hebben naast bestaande instrumenten. Vergeleken met de instrumenten die zijn ontworpen voor het beoordelen van de werkalliantie kan de QET potentiële alliantieproblemen voorspellen al voordat een therapeutische alliantie tot stand wordt gebracht. Een slechte score op de QET kan erop wijzen dat er zeer sensitief en authentiek moet worden gehandeld binnen toekomstige therapeutische relaties en dat het wellicht beter is om toe te wijzen aan behandelprogramma's waarin het verminderen van epistemisch wantrouwen (en goedgelovigheid) het belangrijkste uitgangspunt van de behandeling is. Dit zou een meer gepersonaliseerde benadering van indicatiestelling mogelijk maken en om specifieke behandelingsbehoeften af te stemmen op de specifieke kenmerken van de patiënt. Hoewel de huidige bevindingen niet als bewijs kunnen worden geïnterpreteerd, kan epistemisch vertrouwen als een eigenschap-achtige dispositie relevant zijn om te onderzoeken bij elke persoon die psychosociale interventies ontvangt die afhankelijk zijn van vertrouwen in anderen. De effectiviteit van verschillende andere behandelingen, zoals farmacotherapie, diabetesbehandeling, voedingsadvies voor overgewicht of sociale interventies zoals

advies over kinderopvang, kunnen bijvoorbeeld allemaal afhankelijk zijn van de openheid om van anderen te leren. Epistemisch wantrouwen kan het tot stand brengen van een emotioneel hechte en oprechte therapeutische relatie in de weg staan en kan daardoor het resultaat van interventies beïnvloeden. Dit onderstreept het belang van de therapeutische alliantie bij het effectief maken van interventies, vooral bij patiënten die lijden aan ernstigere PS. Het opnieuw aanwakkeren van epistemisch vertrouwen kan daarom een belangrijk doel zijn binnen alle psychologische behandelingen. De context waarin epistemisch vertrouwen kan worden hersteld, is echter niet beperkt tot alleen de therapeutische relatie. Positieve, vertrouwensbevestigende relationele ervaringen in de eigen bredere context van de patiënt buiten de therapie kunnen zelfs nog belangrijker zijn bij het faciliteren van epistemisch vertrouwen. Niet alleen een goede therapeutische band, maar ook een sterkere sociale steun buiten de therapie voorspelt succesvolle behandelresultaten. Een reeks positieve menselijke relaties, vooral in een omgeving die wordt gekenmerkt door goedaardige en veilige hechtingsrelaties, kan EV genereren en een vermogen tot sociaal leren activeren. Dit benadrukt het belang van direct ingrijpen in de sociale wereld, die veel verder gaat dan psychotherapie alleen. Buiten de klinische arena kan epistemisch vertrouwen op veel gebieden waarde hebben, bijvoorbeeld bij het verklaren van sommige hedendaagse sociaal-culturele dynamieken, zoals het geloof in complottheorieën en nepnieuws, en aarzeling over vaccins. Onaangepaste reactiepatronen op pandemische beperkingen, complot denken in het algemeen, complot denken over COVID-19, aarzeling over vaccins in het algemeen en aarzeling over COVID-19-vaccinatie bleken allemaal verband te houden met disfunctionele persoonlijkheidskenmerken, onrijpe afweermechanismen, slecht mentaliseren en epistemisch wantrouwen of goedgelovigheid. Dit pleit voor mitigatiestrategieën die zowel wantrouwen, goedgelovigheid als verwerking van verkeerde informatie aanpakken, met interventies voor individuen, autoriteiten en de samenleving als geheel. De theorie van epistemisch vertrouwen kan een nuttig kader bieden bij het begrijpen en aanpakken van deze problemen.

Ten slotte kan de theorie van epistemisch vertrouwen ons een beter begrip geven van aanvankelijk moeilijk te begrijpen gedrag, zowel van individuen als in de samenleving. Gedrag in een nieuw licht zien helpt ons om anders te reageren en ons begrip van

jeugdtrauma's te herformuleren. Op deze manier kunnen we effectievere benaderingen ontwikkelen die veerkracht en herstel bevorderen en helpen bij het opbouwen van vertrouwensrelaties en het creëren van kansen om ons op nieuwe manieren aan te passen.

Questionnaire Epistemic Trust

(S. Knapen, A. Beekman & J. Hutsebaut)

Deze vragenlijst bestaat uit een aantal stellingen.
Geef per stelling aan in hoeverre je het met deze stelling eens bent.
Dit kan op een schaal die loopt van 1 (helemaal niet mee eens) tot 5 (helemaal mee eens).
Sommige stellingen gaan over in hoeverre iets in het algemeen voor je geldt terwijl andere stellingen specifiek ingaan op een behandelsetting. Als behandelaar kun je dan je behandelaar op dit moment in gedachten nemen maar als je deze (nog) niet hebt, kun je ook een andere behandelaar (bijvoorbeeld je huisarts, een eerdere behandelaar of een fysiotherapeut) in gedachten nemen.

		1 Helemaal niet mee eens	2 Niet mee eens	3 Neutraal	4 Mee eens	5 Helemaal mee eens
1	Ik word snel achterdochtig of de informatie die de meeste andere mensen mij geven betrouwbaar is.	O	O	O	O	O
2	Ik twijfel meestal aan de bedoelingen van andere mensen wanneer ze mij adviezen geven.	O	O	O	O	O
3	Ik heb de neiging om op mijn hoede te zijn wanneer iemand mij iets probeert te leren.	O	O	O	O	O
4	Ik moet ervoor oppassen dat anderen mij geen misleidende informatie geven.	O	O	O	O	O
5	Ik ben op mijn hoede wanneer andere mensen mij informatie geven.	O	O	O	O	O
6	Ik word achterdochtig waarom iemand mij iets probeert te leren..	O	O	O	O	O
7	Ik sta open voor informatie die andere mensen mij geven.	O	O	O	O	O
8	Ik ben meestal nieuwsgierig naar dingen waar andere mensen verstand van hebben.	O	O	O	O	O
9	Ik stel vragen wanneer ik iets niet begrijp.	O	O	O	O	O
10	Ik heb meestal niets aan de adviezen of tips van mijn behandelaar.	O	O	O	O	O
11	Tijdens behandelingen ben ik meestal op mijn hoede om mezelf te beschermen tegen misleidende informatie.	O	O	O	O	O
12	Ik denk meestal dat ik niets heb aan wat mijn behandelaar mij vertelt.	O	O	O	O	O
13	Ik twijfel snel aan de informatie die ik krijg van mijn behandelaar.	O	O	O	O	O
14	Ik verwacht dat de adviezen van mijn behandelaar me zullen helpen.	O	O	O	O	O

Q

15	Mijn behandelaar helpt me om na te denken over ideeën die in mijn eentje nooit bij me waren opgekomen.	O	O	O	O	O
16	De tips en adviezen die ik krijg van mijn behandelaar zijn misschien bruikbaar voor andere mensen, maar niet voor mij.	O	O	O	O	O
17	Mijn behandelaar geeft me waardevolle informatie en adviezen.	O	O	O	O	O
18	Ik ben op mijn hoede om de informatie die ik krijg van mijn behandelaar te accepteren.	O	O	O	O	O
19	Ik schrik ervoor terug om adviezen van mijn behandelaar aan te nemen over wat ik moet doen.	O	O	O	O	O
20	Ik ben op mijn hoede wanneer mijn behandelaar mij iets probeert te leren.	O	O	O	O	O
21	Ik sta open voor de informatie die mijn behandelaar me wil geven.	O	O	O	O	O
22	Ik ben meestal nieuwsgierig naar de tips en adviezen van mijn behandelaar.	O	O	O	O	O
23	Ik ben geïnteresseerd in de dingen die mijn behandelaar mij kan leren.	O	O	O	O	O
24	Ik ben erg kieskeurig welke informatie van mijn behandelaar ik kan vertrouwen en welke niet.	O	O	O	O	O

Scoring en norm scores

Voor het berekenen van de totaalscore op de QET moeten eerst de volgende items omgecodeerd worden: 1, 2, 3, 4, 5, 6, 10, 11, 12, 13, 16, 18, 19, 20 en 24.
De totaalscore wordt berekend door de scores op alle items op te tellen. Een hoge score is een indicatie voor veel Epistemisch Vertrouwen.

Normscores totaal

	Gemiddelde	Sd
Ernstige Persoonlijkheidsstoornis	86,6	13,6
Angststoornis (zonder trauma)	94,0	11,5
Geen stoornis	99,9	10,4

Items per schaal

Items 1 t/m 6	Hyperwaakzaamheid
Items 7, 8, 9, 21, 22, 23	Nieuwgierigheid en openheid
Items 10, 12, 14 through 17	Verwachtingen van-/ervaringen met hulp
Items 11, 13, 18, 19, 20 en 24	Openstaan voor hulp

Dankwoord

In dit hele traject stond ik op zijn minst nogal ambivalent tegenover deze promotie. In welk leven kon ik naast alles wat ik al deed, fulltime werken, trainingen, supervisie en leiding geven, en gewoon leven, ook nog gaan promoveren? Zonder mijn grote bewondering voor **Peter Fonagy** en zijn "yes to all your questions" was ik er überhaupt nooit aan begonnen, waarvoor dank. Echter, gedurende het traject ben ik er steeds meer in gegroeid, kon ik voorzichtig mijn innerlijke 'verzet' wat laten varen en kon ik mezelf verbazen over wat ik kennelijk toch nog aan kwaliteiten kon ontwikkelen waarvan ik dacht die toch echt niet te bezitten. Vooral of pas in de fase van de data-analyse begon ik er lol in te krijgen, het opschrijven daarna was nog een hele worsteling, maar tegen de tijd van het schrijven van dit proefschrift begon ik het grotere geheel te zien, in mijn onderzoek, maar ook in mijn ontwikkeling. Inmiddels ben ik trots op wat er hier voor me ligt, maar wat ik nooit had bereikt zonder de hulp en steun van velen.

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Curriculum Vitae

Saskia Knapen werd op 20 januari 1970 geboren in Eindhoven en groeide op in Brabant. Na het behalen van haar Atheneum Bèta diploma, vertrok zij naar Utrecht waar zij in eerste instantie Biologie ging studeren. Een jaar later werd zij ingeloot voor Geneeskunde en studeerde in 1997 af als basisarts. In de coschappen werd zij gegrepen door de psychiatrie en in 1999 startte zij met de specialisatie tot psychiater, die zij in januari 2004 voltooide. Daarna werkte zij 20 jaar als volwassenen psychiater bij Altrecht, de eerste jaren in de acute psychiatrie: acute opname afdeling, crisisdienst en IHT. Na een sabbatical met haar gezin in de Verenigde Staten, keerde zij in 2009 terug bij Altrecht in een sociaal psychiatrisch behandelteam voor mensen met toen nog 'onbehandelbaar' geachte persoonlijkheidsstoornissen. Zij werd gegrepen door Mentalization Based Treatment en de combinatie van MBT met sociale psychiatrie bleek een ongekend succes. In 2017 introduceerde zij Adaptive Mentalization Based Integrative Treatment in Nederland, een werkwijze voor ernstige complexe problematiek en publiceerde in 2023 het boek "AMBIT in de praktijk" bij uitgever Hogrefe. Van 2015 tot 2022 was zij inhoudelijk leidinggevende van de zorgeenheid Persoonlijkheidsstoornissen van Altrecht.
Naast haar werk voor Altrecht participeerde zij in diverse podia binnen het Kenniscentrum Persoonlijkheidsstoornissen, is zij actief bij de Nederlandse Vereniging voor Psychiatrie, zat zij in de Raad van Toezicht van het Kenniscentrum Persoonlijkheidsstoornissen, spreekt zij op diverse (inter)nationale congressen en geeft les en trainingen bij o.a. de RINO, de A-opleiding tot psychiater en MBT en AMBIT expertise. In 2015 behaalde zij de certificatie MBT therapeut en in 2023 rondde zij de opleiding Sensorimotor Psychotherapy level II af.
In juli 2024 stapte zij over na 22 jaar Altrecht naar TOPP-zorg, een kleine specialistische instelling voor kinderen, jongeren, hun ouders en volwassen in Zeist.
Saskia is 25 jaar getrouwd met Jeroen en moeder van 2 dochters Hannah (22) en Rosa (19).

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