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The effects of attachment insecurity and cognitive flexibility on mentalization in psychotherapists

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THE EFFECTS OF ATTACHMENT INSECURITY AND COGNITIVE FLEXIBILITY ON MENTALIZATION IN PSYCHOTHERAPISTS

BY

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Abstract

The wounded healer concept suggests that one's therapeutic ability is rooted in one's own experiences of pain and suffering. The present study used this concept as a theoretical framework from which to explore issues related to therapist insecure attachment and therapist skill. It examined the role of therapist cognitive flexibility in the relationship between therapist attachment insecurity and therapist mentalization capacity. Participants were 158 therapists from different clinical fields of study and varying levels of clinical experience who completed an online protocol. Results indicated that avoidant attachment negatively predicted mentalization capacity, validating in a therapist sample what previous studies have demonstrated with non-therapist samples. Additionally, results showed that when therapists' self-reported cognitive flexibility was high, the relationship between attachment anxiety and mentalization was negative, such that as attachment anxiety increased, mentalization capacity decreased. This was contrary to expectations. Finally, correlations revealed no relationships among a self-report, a neuropsychological, and an observer-rated measure of cognitive flexibility. This study was the first to validate the use of the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006) (a modified version of the Wisconsin Card Sorting Test using emotional stimulus words) to assess cognitive flexibility in therapists. Additionally, it was the first to validate the use of the Reflective Functioning Scale (RFS; Fonagy et al., 1998) to code the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969) in a therapist population. Implications for psychotherapy and psychotherapy training as well as study limitations and future directions for research are discussed.

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I. Introduction

Mentalization is a multifaceted process by which an individual is able to understand oneself and others on the basis of mental states (Bateman & Fonagy, 2004, 2012) and it is an especially important construct in the context of psychotherapy. Mentalization has long been understood by attachment- and relationally-influenced psychodynamic clinicians to be an essential therapist characteristic for positive psychotherapy process and outcome (Allen et al., 2008; Fonagy & Allison, 2014; Jurist, 2018). This is also supported in the research, which has found that therapist reflective functioning, defined as the psychological processes underlying mentalizing capacity (Fonagy et al., 1998), positively predicts the ability to establish a therapeutic alliance as well as overall therapist effectiveness (Cologon et al, 2017; Reading et al., 2019). Finally, it has been demonstrated that reflectiveness, a core component of mentalization, can be enhanced in therapists via training (Ensink et al., 2013). In the interest of advancing therapist training and efficacy, the present study aimed to gain a better understanding of therapist mentalization by investigating how it is impacted by therapist attachment style and cognitive flexibility.

Mentalization capacity is a core feature of attachment security (Dimitrijević et al., 2018; Hausberg et al., 2012; Nolte et al., 2011, 2013). Insecure attachment is understood as a risk factor for poor mentalizing, and secure attachment is understood as a protective factor that promotes mentalizing (Bateman & Fonagy, 2004; Fonagy & Luyten, 2009; Kim et al, 2014). Psychotherapist attachment style and its impact on overall patient outcome has been studied extensively, with findings indicating that attachment style impacts the way therapists understand and flexibly respond to the subjective experiences

of their patients (Wallin, 2007). Although links between mentalizing and attachment style are well-established in the literature on patient and non-therapist populations, these findings require further validation in psychotherapist samples. One might assume that insecurely attached therapists are prone to mentalization difficulties in the same way insecurely attached non-therapists are. However, the theoretical literature on therapists as "wounded healers", a term coined by Carl Jung (1954) (see also Zerubavel & Wright, 2012), as well as preliminary empirical findings indicating that insecure attachment in *some* therapists contributes to empathic strengths (Trusty et al., 2005) and is associated with high reflective functioning (Cologon et al., 2017), suggest that there are important differences among therapists in terms of their effectiveness. In fact, therapist effects account for considerably more of the variance in overall patient outcome than treatment effects, yet they remain an understudied area of the field (see Wampold & Imel, 2015, for a review).

The emotional nature of their work often requires therapists to exercise their mentalizing skills in affectively charged interpersonal interactions with challenging patients (Abargil & Tishby, 2021; Bourke & Grenyer, 2017; Eubanks et al., 2023; Muran & Eubanks, 2020; Safran & Muran, 2000). The ways in which insecure attachment style impacts a therapist's mentalization capacities in such a context might be contingent on their adaptability to the affective shifts that occur. The present study addressed this potential role of adaptability via the construct of *cognitive flexibility*. Cognitive flexibility is the ability to adjust to new situations and the capacity to switch between perspectives or modes of thinking (Gündüz, 2013; Zmigrod et al., 2020).

The present study investigated the role of therapist cognitive flexibility in the relationship between therapist attachment insecurity and therapist mentalization capacity, with the following three main aims: (1) to empirically validate the relationship between attachment style and mentalization capacity in a therapist sample, (2) to empirically validate the theoretical link between cognitive flexibility and adaptive mentalizing, and (3) to investigate whether cognitive flexibility facilitates reflective functioning in insecurely attached therapists. To account for the impact of emotional context, therapist mentalization was assessed by having participants reflect on challenging moments with their own patients and therapist cognitive flexibility was assessed using the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006), which is a modified version of a common neuropsychological test (the Wisconsin Card Sorting Test, WCST; Heaton, 1981) incorporating emotional stimulus words.

The following critical review of the literature encompasses the theory and research on mentalization, cognitive flexibility, and attachment, with an emphasis on the relevance of these variables for psychotherapists. It begins with an overview of the multifaceted nature of mentalization and the crucial role of flexibility in good mentalizing, a theoretically well-established yet empirically understudied relationship. This is followed by a critical summary of the literature on therapist cognitive flexibility and therapist mentalization, further highlighting the lack of empirical attention paid to investigating the relationship between these two variables — despite clear indicators of a positive link — and the importance of addressing this gap. Finally, the effect of attachment-based stress on mentalizing capacity in insecurely attached individuals is summarized. The chapter ends with a critical review of the literature on therapist

attachment and therapist mentalization, laying out the conceptual rationale for hypothesizing that insecurely attached therapists may not be impacted by attachment-based stress in the same way the literature on non-therapists would suggest.

II. Literature Review

Mentalization as a Multidimensional Construct

Mentalization is the ability to attribute mental states (like beliefs, feelings, and hopes) to oneself and others, enabling one to make sense of one's own and others' behavior (Fonagy & Target, 1997). It is thought to be crucial for self-organization (Bateman & Fonagy, 2004), affect regulation (Fonagy & Target, 2006), and navigating social situations (Nolte et al., 2013). Mentalization is considered a multifaceted capacity, which involves the dynamic interaction between the following four polarities: (1) automatic/controlled, (2) self/other-oriented, (3) externally/internally-focused, and (4) cognitive/affective (Bateman & Fonagy, 2012; Fonagy & Luyten, 2009, 2018; Gagliardini et al., 2018; Luyten et al., 2020). Automatic mentalizing is a fast, implicit, and unreflective process that requires little effort, attention, or intention. By contrast, controlled mentalizing is a conscious and reflective process that is slow and does require effort, attention, and intention. Mentalizing can be focused on the self or the other and can involve inferences based on external features (e.g., facial expressions, behaviors) or assumptions about internal, non-visible features (e.g., thoughts, feelings, experiences). Finally, cognitive mentalizing involves the awareness that others may have a different perspective, the ability to recognize and reason about mental states, and the ability to use that understanding to explain and predict behavior. Affective mentalizing is a more embodied and automatic process that involves the ability to understand the qualitative feeling of mental states. Skilled mentalizing requires maintaining a balance among these different polarities (Bateman & Fonagy, 2012; Fonagy & Luyten, 2009, 2018; Gagliardini et al., 2018; Luyten et al., 2020).

The Role of Flexibility in Mentalization

The central role of flexibility in skilled mentalizing is repeatedly and explicitly affirmed throughout the theoretical (Fonagy & Adshead, 2012; Fonagy & Allison, 2014; Fonagy & Luyten, 2018; Swenson & Choi-Kain, 2015), clinical (Bateman et al., 2014; Bateman & Fonagy, 2012, 2016; Fonagy & Luyten, 2009; Holmes & Slade, 2017; Sharp et al., 2020), and empirical literature (Gori et al., 2021; Kocsis-Bogar et al., 2017). It is not only the ability to understand others' mental states but the ability to do so flexibly that is a prime indicator of what separates those who are most skillful at mentalizing from those who are poor or simply adequate at mentalizing (Choi-Kain & Unruh, 2016; Swenson & Choi-Kain, 2015). Hence, various authors assert that enhancing patients' mentalizing entails decreasing rigidity and increasing flexibility: Fonagy and Allison (2014) write that by providing patients with the experience of being mentalized, the therapist "helps the patient to relinquish the rigidity that characterizes individuals with enduring personality pathology" and allows for "the relearning of flexibility" (p. 372). Choi-Kain and Unruh (2016) highlight the role of the therapist in increasing patients' "ability to broaden overly rigid, reactive ... perspectives" (p. 3). When comparing Mentalization-Based Treatment (MBT; Bateman et al., 2014) and Dialectical Behavior Therapy (DBT; Linehan, 1993), Swenson and Choi-Kain (2015) identify the enhancing of patients' "self-awareness, attentional control, and flexible thinking in the contexts of emotions and relationships" (p. 200) as a common aim.

Various authors emphasize the importance of being able to flexibly shift between and across the above-mentioned polarities of mentalization based on the needs of the environment (Bateman et al., 2014; Gori et al., 2021) to achieve skilled mentalizing

(Fonagy & Luyten, 2018; Sharp et al., 2020). This capacity is especially critical in the controlled/automatic polarity, which Bateman and Fonagy (2012) call "the most fundamental polarity underlying mentalizing" (p. 20). Controlled mentalizing is called for in moments that demand someone to pay attention to and deliberately wonder about another's underlying mental states, such as when a parent notices their child crying or when a husband notices a sudden change in his wife's mood or tone (Bateman & Fonagy, 2016). An inability to switch from automatic to controlled mentalizing when the situation calls for it can lead to a potentially distorted understanding of others based on quick assumptions as opposed to measured reflection (Bateman & Fonagy, 2012, 2016). Bateman and Fonagy (2012) write, "high levels of mentalization imply being mindful of minds and involve adaptive flexibility in switching from automatic to controlled mentalization" (p. 21).

Finally, in addition to being involved in maintaining balance between the different polarities of mentalization, flexibility is also what underlies cognitive mentalizing, which is ultimately contingent on controlled mentalizing (Luyten et al., 2020). Controlled, cognitive mentalizing is characterized by reflection whereas automatic, affective mentalizing is characterized by reflexivity (Bateman & Fonagy, 2012, 2016; Fonagy & Luyten, 2009). Helping patients engage in increased reflection is a common goal across psychodynamic and cognitive-behavioral therapies (Fonagy & Adshead, 2012). Instead of immediately accepting superficial, automatic assumptions and judgments, patients are encouraged to reflect on thoughts and emotions, consider their various possible causes, and generate various possible ways of responding to them (Fonagy & Adshead, 2012; Swenson & Choi-Kain, 2015). The ability to do this necessarily involves the ability to

flexibly shift between multiple perspectives. Swenson and Choi-Kain (2015) write, “For mentalizing to be flexible means that the individual is capable of considering various ways to understand the behavior of interest” (p. 204). While flexibility is inherent in the description of the multifaceted construct of mentalizing, it had not been tested as a component of the capacity to mentalize prior to the present study.

Therapist Mentalization

There is a vast theoretical and clinical literature that places significant importance on therapist mentalizing capacity regarding facilitating positive patient change (e.g., Bateman et al., 2014; Bateman & Fonagy, 2012, 2016; Choi-Kain & Unruh, 2016; Fonagy & Adshead, 2012; Fonagy & Allison, 2014; Fonagy & Luyten, 2018; Holmes & Slade, 2017; Swenson & Choi-Kain, 2015). The importance of therapist mentalization has been stressed in relation to the establishment of a therapeutic alliance (Bateman & Fonagy, 2016; Reading et al., 2019), identifying and resolving alliance ruptures (Fonagy, Campbell, & Luyten, 2023), building epistemic trust (Fonagy & Allison, 2014; Luyten et al., 2020), positive patient outcomes (Fonagy & Adshead, 2012; Holmes & Slade, 2017), and overall therapist effectiveness (Cologon et al., 2017). Some authors argue that the therapist’s capacity to mentalize is a prerequisite to increase that capacity in patients and that addressing dysfunctional mentalizing is a common training goal across various treatment orientations, either implicitly or explicitly (Bateman & Fonagy, 2004; Fonagy & Adshead, 2012; Fonagy & Allison, 2014; Holmes & Slade, 2017). For example, in MBT (Bateman et al., 2014), the therapist adopts a *mentalizing stance*, which is intended to model skilled mentalizing for the patient and in-so-doing help them develop it for themselves. Consistent with the broader mentalization literature reviewed above, the

following descriptions of the mentalizing stance show that flexibility plays a central role in a therapists' capacity to mentalize well. Swenson and Choi-Kain (2015) write that, in the mentalizing stance, the "therapist is to be present, nonjudgmental, open-minded, transparent, flexible, warm, and collaborative" (p. 213). Sharp et al. (2020) write: "MBT manuals suggest openness, high cognitive flexibility, intellectual humility, low rigidity, adaptability, and high tolerance of uncertainty as key ingredients of the mentalizing stance" (p. 3).

Thus, the mentalization literature makes it clear that skilled mentalizing, especially as it applies to therapists, requires (1) the ability to maintain a balance among the different mentalizing polarities by flexibly switching between them according to the demands of environmental changes (Bateman & Fonagy, 2012, 2016) and (2) the ability to reflect on various ways of understanding the mental states underlying behavior (Fonagy & Adshead, 2012; Swenson & Choi-Kain, 2015). Therefore, the present study predicted that a variable of particular importance in facilitating skilled therapist mentalizing is cognitive flexibility. Cognitive flexibility is the ability to adjust to new situations and the capacity to switch between perspectives or modes of thinking (Gündüz, 2013; Zmigrod et al., 2020). The terms flexibility and cognitive flexibility have been used interchangeably within the theoretical mentalization literature (e.g., Fonagy & Luyten, 2018; Kocsis-Bogar et al, 2017; Sharp et al., 2020) (i.e., flexibility has been rated on a variety of variables).

Despite its importance supported by vast theoretical and clinical literatures, the empirical literature on therapist mentalization is lacking, with only three existing studies done to date (Cologon et al., 2017; Ensink et al., 2013; Reading et al., 2019). Given the

role therapist mentalization is theorized to play in alliance-building (Bateman & Fonagy, 2016; Reading et al., 2019), alliance rupture identification and repair (Fonagy et al., 2023), and positive psychotherapy process and outcome (Cologon et al., 2017; Fonagy & Adshead, 2012; Holmes & Slade, 2017; Reading et al., 2019), prioritizing research on the risk and protective factors for therapist mentalization is crucial to advance therapist training and therapeutic efficacy. Additionally, as will be demonstrated in a later section, none of the existing empirical studies on therapist mentalization address the crucial role of cognitive flexibility in therapists' capacity to mentalize skillfully. The present study sought to address this gap and validate the role of cognitive flexibility in therapist mentalizing using three different measures to assess cognitive flexibility from three different rating perspectives: (1) the Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995), a self-report measure, (2) the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006), a neuropsychological task, and (3) an exploratory observer-rated measure developed by the author.

Therapist Cognitive Flexibility

Therapist flexibility is measured in a number of ways in the literature, including self-report and observer-rated assessments. A gap in the literature on therapist flexibility is that in most empirical studies, therapist flexibility is measured using only one rating perspective (e.g., self-report or performance-task) (Goldman et al., 2013, 2018; Katz et al., 2019; Lazarus et al., 2018; Owen & Hilsenroth, 2014). For example, in a study by Lazarus et al. (2018), therapist flexibility was rated according to the level of variability in therapists' inferences about their patients. In other studies, therapist flexibility was rated according to the level of variability in therapists' use of different manualized

interventions in session (Goldman et al., 2013, 2018; Katz et al., 2019; Owen & Hilsenroth, 2014). Finally, in a study by Martinez and Dong (2020), therapist cognitive flexibility was measured using a self-report measure, the Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995). As will be discussed in more detail in this section, the above empirical studies demonstrate flexibility to be an essential therapist capacity for promoting good psychotherapy process and outcome. Importantly, flexibility was found to underly a variety of clinical domains (i.e., inference, use of interventions, etc.). This suggests that cognitive flexibility may be multifaceted and that its measurement ought to account for this. The present study did this by measuring therapist cognitive flexibility in three different ways, combining various rating perspectives, and thus yielded a more comprehensive evaluation of therapist cognitive flexibility. This section first summarizes the above studies on therapist flexibility, highlighting their different approaches to measurement with a specific focus on the following three issues related to the assessment of therapist flexibility in this literature: (1) limitations of rating flexibility according to therapist performance, (2) self-report bias, and (3) assessing trait vs. state flexibility.

Limitations of Rating Flexibility According to Therapist Performance

In a number of empirical studies, therapist flexibility is rated according to how therapists perform in certain clinical domains. For example, Lazarus et al. (2019) investigated the impact of therapists' inferential flexibility on their empathic accuracy with patients from session to session. Inferential flexibility was defined as the level of fluctuation of therapists' inferences about patients' emotions over time. This is characterized by a sensitivity to patients' emotional cues and an "adaptive flexibility" (p. 58) that prevents them from remaining rigidly fixed on one specific inference. Empathic

accuracy is another term for cognitive empathy, which the authors defined as "the accurate perception or understanding of fleeting mental states" (p. 57). To assess for therapist inferential flexibility, 174 clients were asked to report how they felt during sessions by filling out the Profile of Mood States (POMS; McNair et al., 1992) after each session. Then, the 114 therapists treating those clients filled out the same measure to indicate how they thought their clients felt during the session. In other words, therapist flexibility was operationalized as the fluctuations in their post-session inferences about their patients' emotions from session-to-session as measured by the POMS (McNair et al., 1992). Results indicated that therapists who were more flexible in their inferences about their clients' emotions demonstrated more empathic accuracy (Lazarus et al., 2019).

In another study, Katz et al. (2019) investigated the relationship between psychodynamic therapists' treatment adherence flexibility early in treatment and psychotherapy outcome with a sample of 46 depressed patients. Treatment adherence flexibility is a subtype of responsiveness, which is defined as the extent to which a therapist is able to recognize and take into account a patient's resources and deficits when responding to their behavior in real time. Treatment adherence flexibility represents the level of variability with which a therapist adheres to a specific treatment model in a session. The authors used an observer-rated measure, the Comparative Psychotherapy Process Scale (CPPS; Hilsenroth et al., 2005), to rate video-recorded sessions for therapists' activity and the extent to which they used Psychodynamic-Interpersonal (PI) techniques and Cognitive-Behavioral (CB) techniques. Therapists' treatment adherence flexibility was assessed via therapists' CPPS scores. The authors found that for

psychodynamic therapists who flexibly integrated CB techniques, there was a stronger relationship between their general adherence to psychodynamic techniques and positive psychotherapy outcome. This suggests that greater therapist intervention flexibility contributes to better patient psychotherapy outcome. These findings are consistent with previous studies on therapist treatment adherence flexibility using the CPPS, which also showed that increased therapist treatment adherence flexibility was positively related to outcome (Goldman et al., 2018; Owen & Hilsenroth, 2014) as well as patient-reported alliance (Goldman et al., 2013).

In the above studies, therapist flexibility was measured by inferring it from therapists' reports about their patients (Lazarus et al., 2019) or the observed variability in therapists' use of different interventions in session (Katz et al., 2019). The advantage of these measurement approaches is that they avoid the issue of self-report bias and yield information about what therapists' flexibility might look like in practice (i.e., behaviorally) as opposed to the level of flexibility they perceive themselves to have. However, a self-report perspective may also address an underlying capacity that predicts flexibility in therapist behaviors related to good overall outcome. To incorporate the therapists' own perspectives on their capacity for flexibility, the present study included a self-report measure of cognitive flexibility, the Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995), in addition to an exploratory observer-rated measure and a neuropsychological task, the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006).

Self-Report Bias

In contrast to the above studies, Martinez and Dong (2020) assessed therapist flexibility via a self-report measure, the Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995). They investigated the relationship between mindfulness, cognitive flexibility, cognitive complexity, and multicultural competence in 78 graduate-level counselors from across the U.S. Mindfulness is the ability to deliberately concentrate on remaining non-judgmentally aware in the present moment, open, and non-reactive (Kabat-Zinn, 2015). Cognitive complexity is the ability to "take in, integrate, and utilize multiple perspectives to facilitate understanding" (Martinez & Dong, 2020, p. 294). Multicultural competence is when a counselor has knowledge and awareness of cultural factors, self-awareness of their own values and biases, and the skills to relate to clients in a culturally sensitive manner (Kim et al., 2003). The authors found that mindfulness, cognitive flexibility, and cognitive complexity each separately positively correlated with multicultural competence and together explained 52% of adjusted variance in multicultural competence. The study's results support the assertion of the American Psychological Association (APA) that "cognitive flexibility (is) required to serve a wide diversity of clients/patients" (APA, 2013, "Preparing Professional Psychologists" section, Para 2). Further, multicultural competence is also a construct for which mentalization is considered a core capacity (Lee & Kealy, 2018). Having an awareness of cultural issues related to both the client and the self necessarily requires the ability to mentalize along the self/other polarity.

A strength of Martinez and Dong's (2020) use of a self-report questionnaire to assess cognitive flexibility is that it yields a trait measure of therapists' perceptions

and/or awareness of themselves regarding their capacity for flexibility, which is not attainable through observer ratings. Although the CFS has been shown to be a valid and reliable measure of cognitive flexibility (Johnco et al., 2014; Martin & Anderson, 1998), relying on it as the sole measure of therapist cognitive flexibility has a number of limitations. First, self-report measures rely on the ability of the participant to accurately reflect and report on themselves. This can lead to invalid responses reflecting biases such as social desirability, which is a concern when studying professionals, such as therapists, as well (Anderson et al., 2016; Ivicic & Motta, 2017). Second, beyond the literature on therapists, cognitive flexibility is also assessed using neuropsychological measures such as the Wisconsin Card Sorting Test (WCST; Heaton, 1981). Studies investigating the correspondence between self-report and neuropsychological measures of cognitive flexibility have found no significant correlations between the two perspectives and suggest that these measures assess different aspects of cognitive flexibility (Johnco et al., 2014; Lounes et al., 2011). Despite no observed correlations between these rating perspectives, it is often recommended to incorporate a self-report measure complementary to neuropsychological tasks of cognitive flexibility to test the validity of the self-report responses as performance tests are further developed and improved. Additionally, if there are discrepancies between the data from the different measurement perspectives, this provides useful information about what aspects of cognitive flexibility each measurement approach taps into (e.g., one's desire to be flexible or to be perceived as such, one's level of self-awareness about their capacity for flexibility, one's actual flexibility in practice, etc.) (Gabrys et al., 2018; Johnco et al., 2014; Lounes et al., 2011). The present study's incorporation of a new neuropsychological measure in addition to a

self-report measure and an observer-rated measure of cognitive flexibility was consistent with the above recommendation.

Assessing Trait vs. State Flexibility

An additional limitation of the studies by Lazarus et al. (2018) and Martinez and Dong (2020) is that therapist flexibility was measured outside of the immediate therapeutic context and thus in the absence of any significant demand placed on emotion-regulation. Lazarus et al.'s (2018) study yielded information about therapists' flexibility across sessions based on inferences therapists made about patients *after* sessions; they did not measure therapists' in-session inferences. Martinez and Dong's (2020) study yielded information about therapists' trait flexibility by having them fill out self-report measures on self-perceived tendencies related to flexibility. Neither measurement approach yielded information about therapists' state flexibility (i.e., flexibility as manifested in specific contexts/moments in time). Thus, a next step in this research is to assess therapist flexibility with consideration for the emotionally arousing context in which treatment occurs. Studies on healthy controls and depressed individuals (Deveney & Deldin, 2006), healthy undergraduate students (Mikulincer & Sheffi, 2000), and depressed patients (Murphy et al., 2012) all found that cognitive flexibility is influenced by emotional stimuli and current mood. Deveney and Deldin (2006) developed an emotional variant of the Wisconsin Card Sorting Test (WCST; Heaton, 1981), called the Emotion Card Sort Test (ECST), to assess the impact of emotional stimuli on cognitive flexibility in a sample of depressed patients and healthy controls. The ECST is a computerized neuropsychological task that exposes participants to emotional stimulus words in the face of a challenging executive functioning task that requires flexible thinking. The authors

found that depressed participants exhibited impaired cognitive flexibility on the ECST relative to non-depressed control participants when the stimuli were negative, but not when the stimuli were positive or neutral. While not an assessment of performance under the pressure of a therapy session, this new measure provides a procedure for investigating therapist cognitive flexibility with emotional challenges similar to the ones found in the study by Deveney and Deldin (2006). Evaluating cognitive flexibility in an emotional context is especially important for therapist samples, given the demands of their profession and the high likelihood of experiencing some form of affective arousal in the context of psychotherapy (Abargil & Tishby, 2021).

In an attempt to simulate the emotional context of psychotherapy, the present study used the ECST with a therapist sample and contributed to its psychometric validity by comparing it to a self-report measure of cognitive flexibility, the CFS (Martin & Rubin, 1995), a self-report measure of depression, the Beck Depression Inventory – Second Edition (BDI-II; Beck et al., 1996), and an exploratory observer-rated measure of cognitive flexibility. (Importantly, while the ECST had never been used with therapist participants, the present study first piloted the tool with a sample of therapists and found it to be reliable and valid within this population.) The use of the ECST to assess for cognitive flexibility within the context of emotional stimuli provided a novel and important contribution to research on therapists in general, and especially with regard to addressing a significant gap in the empirical therapist mentalization literature. As a performance task, the ECST provides another perspective on the assessment of cognitive flexibility and compared to a self-report measure is less likely to be impacted by subjective biases and intentional distortion of responses. Due to the inclusion of

emotional stimuli, the ECST incorporates an emotional challenge for therapists not included in other neuropsychological tasks, like the WCST, in that it provides an emotional context that puts pressure on therapists' capacity for cognitive flexibility. The ECST is also a relatively recently developed task, having only been used in two empirical studies to date (Cerny et al., 2019; Deveney & Deldin, 2006), so therapists were less likely to be familiar with it. The novelty of the ECST was a strength of these studies as well as the current study, since the task had participants perform under pressure without knowledge of what was being assessed.

The above studies offer support for the idea that flexibility is an essential capacity for therapists when it comes to achieving positive psychotherapy process and outcome. These studies' approaches to measuring therapist flexibility were limited by their singular rating perspectives (i.e., only self-report or only observer-rated). The present study built upon the studies described above by measuring cognitive flexibility using three different rating perspectives: self-report, neuropsychological task, and observer-rated assessment.

Cognitive Flexibility and Mentalizing in Therapists

Despite the strong theoretical support for the role of cognitive flexibility in therapist mentalization (e.g., Bateman et al., 2014; Bateman & Fonagy, 2016; Sharp et al., 2020), cognitive flexibility is not included as a variable in any of the existing empirical studies on therapist mentalization. Ensink and colleagues' (2013) study on therapist mentalization is a good example of this and of why empirically validating the role of cognitive flexibility in therapist mentalization is a crucial next step in the literature, especially in the interest of improving therapist mentalization training. The authors operationalized therapist mentalization capacity as reflective mental activity,

assessed by the Therapist Mental Activity Scale (TMAS; Normandin et al., 2012). As will be elaborated on in more detail below, although the ability to be flexible is inherent in the definition of reflective mental activity, cognitive flexibility is not explicitly measured by the TMAS.

Ensink et al. (2013) examined whether 40 female and 8 male novice therapists' reflective functioning about challenging patients with borderline personality disorder (BPD) could be improved through training. Participants were randomly assigned to either a mentalization training (i.e., experimental) condition or a didactic training (i.e., control) condition. Mentalization training consisted of teaching participants to use their personal and affective reactions to the patient to better understand the patient's past and present experiences. All participants' mentalization abilities were measured using the Therapist Mental Activity (TMA) protocol and rated using the Therapist Mental Activity Scale (TMAS; Normandin et al., 2012).

The TMAS is a task-based measure of therapist mentalization, which assesses three modes of mental activity: reactive, rational, and reflective. In the reactive mode, therapists' cognitions about patients are influenced by their emotional reactions, such as irritation with the patient. In the rational mode, therapists' cognitions about patients are influenced by theoretical knowledge and deductive reasoning. In the reflective mode, therapists' cognitions about patients are influenced by a desire and effort to imagine and understand the mental states of the patient as well as use their awareness of their own mental states to contribute to their reflection. The authors operationalized mentalization capacity via therapists' scores within the reflective mode only. They found that participants in the reflective functioning training group showed an increase in reflective

mental activity and a decrease in rational mental activity, while participants in the didactic group (i.e., control group) showed a decrease in reflective mental activity and an increase in rational mental activity. No difference was found between training groups in regard to reactive mental activity.

Importantly, and relevant to the present study, although cognitive flexibility was not assessed by the authors, it is inherent in the capacities that were improved upon via the mentalization training as well as in the definition of reflective mental activity itself, which was used to operationalize therapist mentalization capacity. In their description of the mentalization training, Ensink et al. (2013) write that participants:

> learned to identify reactions that distracted from their understanding of the patient, affected their neutrality, blocked them from further understanding or propelled them to act out, and distinguish them from those that provided useful additional data that could be elaborated in the service of understanding the patient (p. 14).

In other words, a key component of the mentalization training involved helping participants develop increased awareness of the range of their reactions to the patient, reflect on their clinical utility, and consider how they might respond (i.e., acting out vs. trying to understand). This is indicative of a key aspect of cognitive flexibility, which is the ability to be aware of and consider multiple alternative responses or solutions in a given situation (e.g., Dennis & Vander Wal, 2010; Martin & Rubin, 1995; Zmigrod et al., 2020). Finally, reflective mental activity "involves an active mentalization process" (Ensink et al., 2013, p. 6) and can be understood as an example of skilled mentalizing (i.e., mentalizing that is balanced and flexibly shifts across mentalizing dimensions).

In sum, cognitive flexibility as it pertains to mentalizing specifically involves the ability to reflect on multiple possible ways of understanding the mental states underlying behavior (Swenson & Choi-Kain, 2015). Cognitive flexibility is inherent in the capacities that Ensink et al.'s (2013) training improved upon in therapists in the mentalization training condition, as well as in the conceptualization of reflective mental activity, but it was not directly measured in the study. Myriad studies, including Ensink et al. (2013), identify cognitive flexibility as a key factor in effective mentalizing (e.g., Bateman & Fonagy, 2016; Fonagy & Luyten, 2009; Swenson & Choi-Kain, 2015). However, prior to the present study, cognitive flexibility had yet to be explicitly empirically explored in relationship to skilled mentalizing by therapists. In the present study, cognitive flexibility and mentalization were explored with a therapist sample to provide empirical support to further improve therapist mentalization training. An aim of the present study was to build on the Ensink et al. (2013) study by empirically validating the role of flexibility in therapist mentalizing, using three different measures of cognitive flexibility.

Mentalization during Challenging Moments in Therapy

Although the implications of the Ensink et al. (2013) study are important and relevant to the present work, methodological limitations affect the interpretation of their results. For example, the TMA protocol requires therapists to respond to seven standard video vignettes of patients with BPD. While using standardized video vignettes is a strength in that it allows researchers to compare how different therapists respond to the same patient material, a limitation of this method is that the same patient material is not equally challenging for all therapists; what is challenging for one therapist might not be challenging for another. Studies have demonstrated that different patients affect different

therapists differently (e.g., Bruck et al., 2006) and thus, not all patients will challenge all therapists' reflective functioning equally (Diamond et al., 2003). However, Ensink et al. (2013) emphasize throughout their article that they are precisely interested in evaluating therapist reflective functioning in challenging contexts with challenging patients. Their use of standardized vignettes to evaluate this limits the extent to which they can claim that mentalization training helps improve therapists' reflective functioning with challenging patients, specifically. The limitation of having therapists respond to standardized vignettes can be addressed by having them respond instead to questions asking them to recall personally challenging moments with patients. A recent study by Reading et al. (2019) does exactly this and is discussed in more detail below.

Reading et al. (2019) coded transcripts of interviews with 43 therapists who were interviewed about their relationships with their patients via the Therapist Relationship Interview (TRI; Safran & Muran, 2007). The TRI is designed to elicit therapists' thoughts, memories, and reflections about one of their patients, with a specific focus on moments of tension and negative process in the therapist-patient relationship. Having therapists reflect on self-selected moments of tension and negative process stimulates affect, triggering them to feel in the interview what they felt in session. The overall approach of the TRI has the potential to approximate what therapists' reflective functioning might look like in such difficult moments more effectively than the use of standardized "difficult" vignettes. Since the present study was specifically interested in investigating therapist reflective functioning in challenging contexts, it used a similar method as the TRI in its assessment of therapist reflective functioning known as the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969), which required therapists to

reflect on and describe difficult moments with specific patients they selected as challenging. This method is elaborated on in more detail in the methods section.

Reading et al. (2019) used the Reflective Functioning Scale (RFS; Fonagy et al., 1998), an observer-rated measure, to assess therapist mentalization. According to a recent literature review on mentalization measures for patients and therapists, Shaw and colleagues (2020) reported that the RFS (Fonagy et al., 1998) is the most commonly used measure of mentalization in published transcript-based studies. The RFS has been found to be reliable (Fonagy & Target, 2005). It typically has strong interrater reliability, with correlations ranging from .81 - .94 (Bouchard et al., 2008; Fonagy et al., 1996), and it has been validated in numerous studies with a range of samples (Fonagy et al., 1998), including therapists (Cologon et al., 2017; Reading et al., 2019). For these reasons, the present study used the RFS in coding therapists' narratives about clinical material to assess for mentalization.

The aim of Reading et al.'s (2019) study was to examine the relationship between therapist reflective functioning and psychotherapy process and outcome. Psychotherapy outcome was operationalized as changes in patient symptoms and interpersonal problems. The aspect of psychotherapy process they focused on was therapists' ability to effectively negotiate the therapeutic alliance with patients, operationalized as therapist reflective functioning. The theoretical basis for their study was derived from Safran and Muran's (2000) rupture resolution model, further elaborated across several studies (see Muran & Eubanks, 2020, for a review), which emphasizes the centrality of the therapist's in-the-moment experiential self-awareness and awareness of the patient's emotional experience when it comes to working through alliance ruptures. Reading et al. (2019) found that

therapist reflective functioning was positively correlated with therapist and patient psychotherapy process ratings on the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989), Session Evaluation Questionnaire (SEQ; Stiles & Snow, 1984), and assessments of alliance rupture resolution. Results demonstrated that therapists with high reflective functioning and their patients both reported higher frequency of alliance rupture resolution. Additionally, patients of therapists with high reflective functioning also reported experiencing a greater depth of exploration in sessions. Exploratory analyses revealed that therapists with high reflective functioning tended to have patients who reported fewer symptoms and interpersonal problems at 6-month follow-up post-treatment.

These results have clear implications for the importance of reflective functioning in successful treatment. Given its demonstrated importance, a necessary question to address as a next step to Reading et al.'s (2019) findings, especially in the interest of psychotherapy training, is what other therapist competencies might contribute to high reflective functioning. In the discussion of their results, these authors write that the association found between therapist reflective functioning level and positive process was "likely due to the positive impact on alliance rupture-resolution" (p. 119). Therapeutic alliance ruptures are generally defined as a negative shift in the quality of the existing alliance and often elicit negative emotions (Safran & Muran, 2000), which in turn have been found to impede one's capacity to mentalize (Bączkowski & Cierpiałkowska, 2015; Fonagy & Bateman, 2006; Nolte et al., 2011, 2013; Vrticka & Vuilleumier, 2012). Specifically, stress and arousal have been found to activate automatic mentalizing, which is reflexive and emotional, and inhibit neural systems associated with controlled

mentalizing (Nolte et al., 2013), which is flexible and reflective (Fonagy & Luyten, 2009).

Considering the impact that stress can have on mentalization, therapists' ability to mentalize effectively during rupture moments in therapy may be contingent on their ability to adapt to these negative shifts. The present study sought to investigate this possibility through the construct of cognitive flexibility, which is the ability to adjust to novel or changing situations and the capacity to switch between perspectives or modes of thinking (Dennis & Vander Wal, 2010; Gabrys et al., 2018; Gündüz, 2013; Zmigrod et al., 2020). Importantly, the extent to which stress and arousal affect one's mentalization capacity has been theoretically and empirically demonstrated to differ depending on attachment style (e.g., Fonagy & Luyten, 2009; Lieberman, 2007; Mayes, 2006; Nolte et al., 2013). Although their findings have important implications that laid the foundation for the present study, neither Ensink et al. (2013) nor Reading et al. (2019) accounted for the attachment style of therapists. Attachment style is inherently linked to the ability to mentalize (Bateman & Fonagy, 2004) and was assessed as a variable in the present study. The literature on the relationship between attachment and mentalization will be reviewed in more detail in a later section below.

Results of a study by Bourke and Grenyer (2017) offer support for the above-mentioned notion that challenging moments with patients might inhibit therapists' capacity to mentalize flexibly. The authors investigated therapist mentalization with BPD patients and depressed (MDD) patients. Participants were 20 therapists with a combined caseload of 80 patients (N = 40 BPD and N = 40 MDD). Each therapist was asked to randomly select 2 of their BPD patients and 2 of their MDD patients and discuss their

relational experiences with each via a semi-structured interview known as the Relationship Anecdotes Paradigm (RAP; Luborsky, 1978). The following prompt was used:

> Please tell me what seeing this patient was like for you, what you wanted out of therapy, and how the patient responded to you. Please elaborate, if you can give me a specific situation of something that happened between you—what the patient said and what you said? (p. 248).

Variations or sections of this prompt were repeated, if necessary, to ensure mentalization capacity was tested. Therapists spoke for an average of 15 minutes, and interviews were recorded, transcribed verbatim, and coded using Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2001) text analysis.

Results showed that when talking about affectively arousing clinical material, therapists' mentalizing was more self-focused and they were less likely to use words related to cognitive processing. The authors suggest that this increase in self-focused mentalizing in response to emotionally-charged content was because heightened emotional processing was overloading cognitive processing, making it more difficult for the therapists to mentalize about the other in addition to themselves. Similar to the Reading et al. (2019) study, a question left unanswered by Bourke and Grenyer (2017) is what other cognitive processing variables might be protective for mentalization, given its vulnerability to emotional stressors? The present study assessed this by including a measure of cognitive flexibility in its model. Both therapist cognitive flexibility and therapist reflective functioning were measured using methods that involve an emotional context. When measuring cognitive flexibility, the present study used a

neuropsychological task called the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006). The ECST specifically assesses cognitive processes within the context of emotionally laden stimuli. When measuring reflective functioning, the present study had therapists reflect on emotionally challenging moments with patients using the FMSS (Gottschalk & Gleser, 1969), an interview method similar to that of the TRI and the RAP. The FMSS will be described in more detail in the measures section.

Attachment-Based Stress, Cognitive Processing, and Mentalization

Mentalization capacities are thought to be influenced by the quality of one's early attachment experiences (Fonagy & Target, 2006). Secure attachment relationships are associated with good mentalization capacities whereas insecure attachment relationships are associated with poor mentalization capacities (Bateman & Fonagy, 2004; Chiesa & Fonagy, 2014; Fonagy & Luyten, 2009; Kim et al., 2014; Mikulincer et al., 2001). Theoretical (e.g., Fonagy & Luyten, 2009) and empirical research suggest that affective arousal can impact one's capacity to mentalize and that the nature of this impact is influenced by attachment-related emotion regulation strategies, which are summarized below (Bączkowski & Cierpiałkowska, 2015; Fonagy & Bateman, 2006; Nolte et al., 2011, 2013; Vrticka & Vuilleumier, 2012).

Different attachment styles have different thresholds at which stress or arousal activates their attachment system, triggering different regulatory strategies developed to manage distress (Mikulincer & Shaver, 2003). Anxiously attached individuals tend to rely on hyperactivating strategies, which involve a strong approach orientation in relationships and a high sensitivity to one's own and others' moods and affective cues, especially regarding negative emotional states or interpersonal experiences (Fraley et al.,

2006; Mikulincer et al., 2003; Shaver & Mikulincer, 2002). Avoidantly attached individuals tend to rely on deactivating strategies, characterized by compulsive self-reliance, denial of needs, avoidance of closeness, and emotional distance (Mikulincer et al., 2003; Shaver & Mikulincer, 2002; Vrticka & Vuilleumier, 2012). Securely attached individuals have internalized the idea that they have sufficient resources available to regulate themselves in times of stress. Thus, they may be less easily aroused or overwhelmed by stressful situations and may have more confidence that they will be able to process negative affect or rely on outside support (Mikulincer & Sheffi, 2000).

Importantly, neuroimaging studies have found that the neural systems associated with automatic mentalization are activated by stress and arousal while those associated with controlled mentalization, and thus also associated with flexibility and reflectiveness, are inhibited (Lieberman, 2007; Mayes, 2006). Based on such findings, Fonagy and Luyten (2009) developed a "biobehavioral switch model of the relationship between stress and controlled versus automatic mentalization" (p. 1367). In their model, they propose that the threshold for switching from primarily controlled, reflective, and flexible mentalizing to automatic, emotionally intense, and instinctual mentalizing differs depending on attachment style. Due to their hyperactivating strategies, anxiously attached individuals are argued to have a low threshold for attachment system activation as well as a low threshold for switching from controlled to automatic mentalizing (Fonagy & Luyten, 2009). Due to their deactivating strategies, avoidantly attached individuals are argued to have a higher threshold for attachment system activation and switching from controlled to automatic mentalizing. As such, avoidantly attached individuals are able to engage in controlled mentalizing for longer than anxiously attached individuals, as long

as they do not reach their threshold for stress tolerance, past which their deactivating strategies might breakdown (Fonagy & Luyten, 2009). Securely attached individuals are argued to be able to keep controlled mentalizing "online" even in the context of increased stress and be able to quickly restore it if it does get knocked "offline" (Bateman & Fonagy, 2016; Fonagy & Adshead, 2012; Fonagy & Luyten, 2009).

Empirical studies on the impact of attachment style on various cognitive processes (curiosity, openness, and creativity) in response to social and informational threats (Mikulincer, 1997; Mikulincer & Sheffi, 2000) provide indirect support for Fonagy and Luyten's (2009) model. Importantly, these cognitive processes underlie good mentalizing (e.g., Bateman et al., 2014; Bateman & Fonagy, 2016; Sharp et al., 2020) and overlap with cognitive flexibility (e.g., Jung & Vartanian, 2018; Kaufman et al., 2017). For example, in response to ambiguous or threatening information, securely attached individuals' confidence in their own resources and the availability of others was found to be manifested in more cognitive openness and willingness to explore. The hyperactivating strategies of anxiously attached individuals were found to manifest in their idea that curiosity would be a threat to social relationships, their withdrawal from information search when it competed with social interaction, and their rigidity in the face of new information. The deactivating strategies of avoidantly attached individuals were found to manifest in repressed curiosity and the rejection of, or reduced tendency to, explore threatening or new information (Mikulincer, 1997). Additionally, anxiously attached individuals were found to exhibit cognitive impairments, including decreased openness and decreased creativity/creative problem solving, in response to both negative and positive affect inductions. Conversely, avoidantly attached individuals did not exhibit

cognitive impairments in response to negative or positive affect inductions (Mikulincer & Sheffi, 2000; Pereg & Mikulincer, 2004). These findings demonstrate avoidantly attached individuals' undifferentiated, defensive exclusion of all affective stimuli and, conversely, anxiously attached individuals' undifferentiated, hypersensitivity to affective cues and fixation on negative cognitions (Mikulincer & Shaver, 2003). Finally, securely attached participants were found to react to positive and negative affect inductions by exhibiting increased openness, more liberal and inclusive mental categorization, and better creative problem-solving performance (Mikulincer & Sheffi, 2000; Pereg & Mikulincer, 2004).

Attachment Activation in Therapists

The impact of attachment-based stress on flexible mentalizing and overall cognitive processing has important implications for the context of psychotherapy, which often involves discussions about difficult past and current relationships, feelings of shame, guilt, and inadequacy, and moments of tension between therapist and patient (Abargil & Tishby, 2021; Bateman & Fonagy, 2012; Fonagy & Adshead, 2012; Fonagy & Luyten, 2009; Muran & Eubanks, 2020; Safran & Muran, 2000). This context will inevitably activate the attachment system (Bateman & Fonagy, 2012; Fonagy & Adshead, 2012) and can lead to lapses in mentalizing in both patients and therapists (Fonagy et al., 2023). Findings indicating that stress and arousal activate the neural systems associated with automatic mentalization and inhibit those associated with controlled mentalization (Lieberman, 2007; Mayes, 2006; Nolte et al., 2013) provide an important foundation upon which further empirical literature must build. Although these studies addressed the neurological underpinnings of mentalization, an assessment of the cognitive and behavioral components that also accompany successful mentalization are a crucial piece

that is missing from the methods. While other researchers have begun to link attachment with cognitive capacities such as cognitive flexibility (e.g., Mikulincer, 1997) and mentalization (e.g., Nolte et al., 2013), they have not done so in therapist samples. Surprisingly, no study to date other than the present study had investigated (in therapists) the relationship between attachment, cognitive flexibility, and mentalization in the context of emotional/stressful stimuli. Given the importance that the theoretical and clinical literature places on therapist mentalization capacity (Bateman & Fonagy, 2016; Cologon et al., 2017; Fonagy & Adshead, 2012; Holmes & Slade, 2017; Reading et al., 2019), this was a significant gap in the literature that was first addressed by the present study.

Therapist Attachment Insecurity and the Wounded Healer Archetype

The correlation between adult attachment style and mentalization capacity has been empirically demonstrated in a number of samples, including clinical samples (Badoud et al., 2018; Dimitrijević et al., 2018; Hausberg et al., 2012), nonclinical samples (Fossati et al., 2018), and children (Fonagy et al., 2011). Prior to the present study, this link had not been validated in psychotherapist samples. The traumatic childhoods and family experiences of some therapists (e.g., Farber et al., 2005) may put them at risk for attachment insecurity (Holmes, 2009; Leiper & Casares, 2000; Rizq & Target, 2010; Slade, 1999). Studies estimate rates of attachment insecurity in therapists to range from 25%-50% in licensed clinical psychologists and to reach up to 70% in family therapists (Ackerman, 2018; Black et al., 2005; Yusof & Carpenter, 2013). One might assume that insecurely attached therapists are prone to mentalization difficulties in the same way insecurely attached non-therapists are. However, there is a concept of

therapists as “wounded healers” in the theoretical literature (Jung, 1954) that provides a framework for conceptualizing insecurely attached therapists as having the potential to be effective.

The term, “wounded healer,” is meant to convey the idea that the therapeutic ability of some therapists is rooted in their own experiences of pain and suffering (Zerubavel & Wright, 2012). This idea has been supported in studies on counselor trainees, which suggest a correlation between negative perceptions of one’s family and higher counseling skill (Watts et al., 1995; Wilcoxon et al., 1989). In another study (Wolgien & Coady, 1997), eight therapists identified by colleagues as particularly effective, were interviewed about what they believed contributed to the development of their clinical skills. Qualitative analyses of interview transcripts showed that the majority of participants cited difficult personal experiences in childhood and/or adulthood, often involving family, as having contributed to the development of their clinical skills. More recently, a survey by Victor et al. (2022) found that in a sample of psychology trainees and faculty in the U.S. and Canada, 82% reported mental health issues in their lives.

Most relevant to the present study, in a study by Trusty et al. (2005) therapist woundedness was operationalized as attachment insecurity. Results of their study suggest that attachment anxiety in therapists might contribute to certain clinical strengths. Trusty et al. (2005) investigated the effects of adult attachment on emotional empathy in 143 counseling trainees. Counselor trainees who were higher in attachment avoidance and lower in attachment anxiety were found to have lower levels of emotional empathy. Conversely, counselor trainees who were lower in attachment avoidance and higher in attachment anxiety were found to have the highest levels of emotional empathy, higher

than securely attached participants. The authors of the study speculated that their findings suggest that avoidantly attached individuals' tendency to use emotional distancing strategies could limit their clinical potential. Further, the authors argued that — consistent with the concept of the wounded healer — anxiously attached clinicians may have learned to turn their tendency to preoccupy themselves with emotions and relationships into a strength. Anxiously attached therapists may demonstrate a similar ability to leverage their hyperactivating strategies in the interest of greater cognitive flexibility in response to negative and positive emotional stimuli on the ECST, which in turn may facilitate better mentalizing capacities. This possibility was investigated in the present study.

With the exception of the Trusty et al. (2005) study, the majority of empirical studies on therapist attachment examine its relationship to psychotherapy process or outcome (Degnan et al., 2016; Lingiardi et al., 2018; Marmarosh et al., 2014). In terms of direct effects between therapist attachment status and process-outcome variables, the results have been mixed (Degnan et al., 2016; Lingiardi et al., 2018; Marmarosh et al., 2014). For example, in one study, Black et al. (2005) found a positive correlation between therapist attachment security and early therapeutic alliance, and a negative correlation between therapist attachment anxiety and positive early alliance. In contrast, Sauer et al. (2003) found a positive correlation between therapist attachment anxiety and early alliance, while Ligiero and Gelso (2002) reported no statistically significant relationship between therapist attachment style and alliance.

One way to interpret these mixed findings in light of the wounded healer concept is that although it is possible that past experiences of pain or suffering could be

transformed into clinical strengths, it is also possible that such histories could negatively impact clinical work, especially if they are out of a therapist's awareness and remain unprocessed (Zerubavel & Wright, 2012). Instead of "wounded healer," a therapist in the latter scenario might be referred to as an "impaired professional" (Jackson, 2001). Insecurely attached therapists who are successful in achieving a positive therapeutic alliance (Sauer et al., 2003) would fall under the wounded healer category and insecurely attached therapists who are unsuccessful in achieving a positive therapeutic alliance (Black et al., 2005) would fall under the impaired professional category. Ligiero and Gelso's (2002) findings suggest that therapist variables other than attachment style might be better predictors of alliance or that the effect of attachment style on alliance is moderated by a third therapist variable, not accounted for in their study. Therapist mentalization capacity is an especially relevant variable in this regard, given its theoretically and empirically demonstrated importance in psychotherapy process and outcome (e.g., Bateman & Fonagy, 2004; Cologon et al. 2017; Fonagy & Allison, 2014; Reading et al., 2019). Further, increased mentalization capacity in insecurely attached therapists would be consistent with the wounded healer concept, which posits that woundedness has the potential to lead to greater sensitivity and empathy (Cushway, 1996).

A recent study by Cologon et al. (2017) provides support for the distinction between wounded healers and impaired professionals and for the idea that therapist mentalization capacity is a better predictor of patient outcome than therapist attachment style. The authors examined the relationship between therapist attachment, mentalization, and effectiveness in a sample of 25 therapists who treated a total of 1,001 clients.

Therapists were administered the Adult Attachment Interview (AAI; George et al., 1985) and then asked to complete the Experiences in Close Relationships scale (ECR; Brennan et al., 1998) and provide Outcome Questionnaire 45 (OQ-45; Lambert et al., 2004) data from their clients. The Reflective Functioning Scale (RFS; Fonagy et al., 1998) was used to score AAI transcripts for therapist reflective functioning. Overall, therapist reflective functioning accounted for 70.5% of the variance in therapist effectiveness. On the one hand, high reflective functioning therapists were found to have significantly better client outcomes than low reflective functioning therapists. Therapist attachment style, on the other hand, did not predict client outcomes. Results also showed that there was a significant interaction effect between therapist attachment style and therapist reflective functioning in terms of their impact on therapist effectiveness: therapists with high reflective functioning and high attachment anxiety outperformed therapists with high reflective functioning and low attachment anxiety. Additionally, while for therapists with high reflective functioning, higher attachment anxiety increased their effectiveness, for therapists with low reflective functioning, higher attachment anxiety decreased their effectiveness, paralleling the distinction between wounded healer and impaired professional. The present study was particularly interested in the therapists who had both high attachment anxiety *and* high reflective functioning. This is inconsistent with the vast literature on non-therapists that demonstrates insecure attachment to be a risk factor for poor mentalizing (Chiesa & Fonagy, 2014; Fonagy & Luyten, 2009; Mikulincer et al., 2001) and lends support for the distinction between wounded healers and impaired professionals. An important next step in this research is to better understand the interaction effect between therapist attachment status and reflective functioning capacity.

The present study predicted that therapist cognitive flexibility would, in part, explain this interaction.

The results of the Trusty et al. (2005) study discussed earlier suggest that therapists with high attachment anxiety, having higher emotional empathy, also possess similar strengths in the affective and automatic mentalizing polarities. In other words, it is reasonable to think that they are skilled at understanding the felt experience of others' mental states, possibly as a result of their own trauma (Bateman & Fonagy, 2016). However, this more automatic, reflexive mentalizing, if not balanced out with a more controlled, cognitive effort to reflect on others' mental states, will not necessarily translate to effective overall mentalizing. The present study predicted that what separates therapists with high attachment anxiety and high reflective functioning from those with high attachment anxiety and low reflective functioning is their ability, as operationalized by cognitive flexibility, to switch from automatic mentalizing to controlled/reflective mentalizing in response to affective arousal in the context of stress.

The Cologon et al. (2017) study used the AAI, an observer-rated measure of reflective functioning that is time-consuming to administer and score and limits the number of participants as a result. To aid the ease of administration and ensure an adequate sample size the present study used the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969) method to obtain narrative data from therapists. The FMSS was self-administered by participants online and took 5 minutes to complete. The resulting narratives were coded for reflective functioning by two certified reliable RFS coders. This process was successfully piloted with no complications or issues and was used again in the methods of the main study. The present study also built on Cologon et

al.'s (2017) use of the ECR to measure therapist attachment. The ECR is the most widely used measure of adult attachment style in laboratory-based studies of attachment and emotion (Levy et al., 2011). It is reported to have excellent psychometric properties that are consistent across clinical and non-clinical populations, as well as trained-clinician populations (Brennan et al., 1998; Mohr et al., 2005; Woodhouse & Gelso, 2008). Finally, the ECR in particular has been shown to be sensitive to therapist attachment insecurity and therapists have been found to have difficulty "faking good" on the ECR (Yusof & Carpenter, 2013). The present study used the Experiences in Close Relationships Scale – Revised (Fraley et al., 2000). The ECR-R is an updated version of the ECR developed by Fraley et al. (2000), based on the same item pool but designed to assess attachment with more precision than the original ECR.

III. Statement of the Problem

Mentalization is the ability to understand oneself and others on the basis of mental states (Bateman & Fonagy, 2004) and is an important therapist characteristic for effective psychotherapy process and outcome (Fonagy & Allison, 2014). It is a multidimensional construct consisting of four dynamically interacting polarities: (1) automatic/controlled, (2) self/other-oriented, (3) externally/internally-focused, and (4) cognitive/affective (Bateman & Fonagy, 2012; Fonagy & Luyten, 2009, 2018; Gagliardini et al., 2018; Luyten et al., 2020). Good or skilled mentalizing is characterized by the ability to maintain a balance between these different polarities depending on the needs of the environment (Bateman & Fonagy, 2012; Fonagy & Luyten, 2018) and to consider various ways of understanding behavior in terms of mental states (Fonagy & Adshead, 2012; Swenson & Choi-Kain, 2015). Flexibility is implicit in this description of skilled mentalizing and a vast body of theoretical research explicitly emphasizes the importance of flexibility in skilled mentalizing (e.g., Bateman & Fonagy, 2012; Swenson & Choi-Kain, 2015), especially for therapists (e.g., Bateman et al., 2014; Holmes & Slade, 2017; Sharp et al., 2020). However, prior to the present study, this had yet to be validated empirically. The present study predicted that cognitive flexibility, the ability to adjust to new situations and switch between perspectives or modes of thinking (Gündüz, 2013; Zmigrod et al., 2020), was of particular importance in facilitating therapist mentalizing.

Studies have measured therapist flexibility in a variety of ways and have found it to be positively associated with empathic accuracy (Lazarus et al., 2018), patient-reported alliance (Goldman et al., 2013), good overall outcome (Goldman et al., 2018; Katz et al., 2019; Owen & Hilsenroth, 2014), and multicultural competence (Martinez & Dong,

2020). Although these studies offer support for the importance of therapist flexibility, their approaches to measuring therapist flexibility have limitations that the present study sought to improve upon. For example, a gap in the literature is that most of these studies only measured therapist cognitive flexibility from a single rating perspective. Some studies assessed cognitive flexibility by inferring it from certain therapist behaviors, such as their reports about their patients (Lazarus et al., 2018) or the range of interventions they use in session (Goldman et al., 2013, 2018; Katz et al., 2019; Owen & Hilsenroth, 2014). Another study measured cognitive flexibility using a self-report measure (Martinez & Dong, 2020). Although each measurement approach has the potential to yield valuable information about how therapists' flexibility manifests in practice, they carry the risk of missing important details about cognitive flexibility when used in isolation. For example, variability in behavior may not necessarily translate to flexibility in cognition and one's perception about one's cognitive flexibility may not necessarily be the most accurate reflection of one's actual abilities.

In order to arrive at a more comprehensive evaluation of cognitive flexibility, the present study assessed cognitive flexibility using three different rating perspectives: a neuropsychological task — the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006) — a self-report measure — the Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995) — and an exploratory observer-rated measure developed by the author. The exploratory measure involved two coders rating therapists' Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969) narratives for markers/indicators of cognitive flexibility. The CFS assessed therapists' own views regarding their capacity for flexibility. The ECST assessed therapists' cognitive flexibility based on their

performance on a modified version of a common neuropsychological task (the WCST; Heaton, 1981) that incorporates emotional stimulus words. Emotional stimuli, arousal, and current mood have been found to negatively impact cognitive flexibility (Deveney & Deldin, 2006; Mikulincer & Sheffi, 2000; Murphy et al., 2012). An additional limitation of the above-mentioned studies on therapist flexibility is that none of them considered the role that emotional context plays in cognitive processing. The use of the ECST in the present study was a first step at addressing this gap.

With regard to therapist mentalization, the empirical literature suggests that therapist mentalization can be improved with training (Ensink et al., 2013), is positively associated with the ability to navigate challenging interpersonal moments in therapy such as alliance ruptures (Fonagy et al., 2023; Reading et al., 2019), and has the potential to be negatively impacted by emotionally arousing patient content (Bourke & Grenyer, 2017). In a therapist mentalization training study (Ensink, 2013), although cognitive flexibility was not measured by the authors, it was inherent in the capacities that were improved upon via mentalization training as well as in the construct used to operationalize mentalization, reflective mental activity. An aim of the present study was to validate the role of flexibility in therapist mentalizing using the three aforementioned measures to assess cognitive flexibility from three different rating perspectives (self-report, neuropsychological task, and observer rating). The present study sought to learn more about the relationship between therapist cognitive flexibility and therapist mentalizing. The aim was to gain further insight into how best to measure therapist cognitive flexibility in a clinically meaningful way and in a way that would be useful for improving therapist mentalization training.

Results of a study by Reading et al. (2019) lend further support for the idea that therapist cognitive flexibility might have an important influence on therapist mentalization. The authors examined the relationship between therapist reflective functioning and psychotherapy process and outcome. Therapist reflective functioning was positively correlated with the therapeutic alliance and alliance rupture-resolution. Alliance ruptures are characterized by negative shifts in the quality of the alliance and the experience of negative emotions (Safran & Muran, 2000). Thus, effective mentalizing during challenging interactions might require the ability to adapt to changing or "shifting" situations, which is a key component of cognitive flexibility (Dennis & Vander Wal, 2010; Gabrys et al., 2018; Gündüz, 2013; Zmigrod, 2020). The role of cognitive flexibility was not addressed by Reading et al. (2019) and the present study sought to address this gap.

The potential deleterious effects of affectively arousing clinical material on therapist mentalization were demonstrated in a study by Bourke and Grenyer (2017). Results showed that, when talking about affectively arousing clinical material, therapists' mentalizing was more self-focused rather than other-focused. An important next step from this study was to investigate the risk and protective factors affecting therapist mentalization capacities in emotionally challenging contexts. Theoretical and empirical research suggest that the extent to which stress and arousal affect one's mentalization capacity is contingent on attachment style, with insecure attachment as a risk factor for lower thresholds of attachment activation and lower thresholds for switching from controlled to automatic mentalizing in response to stress (e.g., Fonagy & Luyten, 2009; Lieberman, 2007; Mayes, 2006; Nolte et al., 2013). None of the therapist mentalization

studies discussed above (i.e., Bourke & Grenyer, 2017; Ensink et al., 2013; Reading et al., 2019) accounted for the attachment style of therapists. The present study addressed this gap and assessed how therapist attachment insecurity relates to cognitive flexibility and mentalization in emotional contexts.

The concept of therapists as "wounded healers" (Jung, 1954) provides a theoretical framework for conceptualizing insecurely attached therapists as having the potential to be effective. Being a wounded healer means one's therapeutic ability is rooted in one's own experiences of pain and suffering (Zerubavel & Wright, 2012). A study by Trusty et al. (2005) provides empirical support for this concept. Counselor trainees who were high in attachment anxiety and low in attachment avoidance were found to have higher levels of emotional empathy than securely attached participants. It is possible that anxiously attached therapists are able to use the intense emotional sensitivity and relational concerns characteristic of their attachment style as a strength.

Findings from Cologon et al.'s (2017) recent study on reflective functioning in therapists also support the idea of the wounded healer. Anxiously attached therapists with high reflective functioning outperformed high reflective functioning therapists with low attachment anxiety, in regard to effectiveness. This positive correlation between therapist attachment anxiety and reflective functioning is inconsistent with research on non-therapist populations (Chiesa & Fonagy, 2014; Fonagy & Luyten, 2009; Mikulincer et al., 2001). Further research is necessary to better understand the interaction effect between therapist attachment status and mentalization capacity. The present study predicted that the relationship between therapist attachment insecurity and therapist mentalization capacity is moderated by therapist cognitive flexibility. This targeted empirical

investigation was a first step towards addressing gaps in the literature regarding therapist characteristics as potential risk or protective factors for mentalization, an important ability for effective therapists.

Variable List

Independent Variable: Therapist Attachment Insecurity

Experiences in Close Relationships Scale – Revised (ECR-R; Fraley et al., 2000). Therapist attachment insecurity was measured continuously along dimensions of attachment anxiety and attachment avoidance. Both the attachment anxiety subscale and attachment avoidance subscale were used. Each yields a mean score; higher values signify greater attachment insecurity.

Moderator: Therapist Cognitive Flexibility

Emotion Card Sort Test (ECST; Deveney & Deldin, 2006). Therapist cognitive flexibility was calculated separately for each valence condition (positive, negative, neutral). Lower total perseverative errors indicated increased cognitive flexibility and higher total perseverative errors indicated decreased cognitive flexibility. Scores for each condition were used in the hypotheses/analyses.

Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995). Therapist cognitive flexibility was indicated by a total sum score on the scale, with higher scores signifying greater cognitive flexibility and lower scores signifying decreased cognitive flexibility.

Exploratory Observer-Rated Measure. As part of an exploratory aspect of the present study, the author developed a rating system to code the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969) for markers of flexibility from an observer-rated perspective. The FMSS was coded for cognitive flexibility on a 3-point scale from 0

(Not Present) to 2 (Very Present), with a score of 1 indicating that flexibility was present but not the most salient theme in the narrative. This is described in more detail in Appendix E.

Dependent Variable: Therapist Mentalization

Reflective Functioning Scale (RFS; Fonagy et al., 1998). The FMSS was also coded for reflective functioning using the RFS. The RFS rates narratives on an 11-point scale from -1 (rejection of RF) to 9 (exceptional RF), with a score of 5 representing "ordinary reflective functioning."

Possible Covariates

- Gender
- Age
- Therapist experience level (measured by number of patients treated to date and total hours of clinical work).
- Therapist depression (measured by the Beck Depression Inventory – Second Edition, BDI-II; Beck et al., 1996).

Primary Hypotheses

In a diverse sample of therapists from across the United States, it was hypothesized that:

1. There would be a significant negative effect of therapist attachment anxiety on therapist mentalization such that as therapist attachment anxiety increased, therapist mentalization would decrease.

2. There would be a significant negative effect of therapist attachment avoidance on therapist mentalization such that as therapist attachment avoidance increased, therapist mentalization would decrease.

3. There would be a significant moderating effect of therapist self-reported cognitive flexibility on the relationship between therapist attachment anxiety and therapist mentalization, such that therapists who reported higher attachment anxiety would have significantly higher mentalization scores when they reported higher cognitive flexibility and therapists who reported higher attachment anxiety would have significantly lower mentalization scores when they reported lower cognitive flexibility.

4. In the positive valence condition of the ECST, there would be a significant moderating effect of therapist performance-based cognitive flexibility on the relationship between therapist attachment anxiety and therapist mentalization, such that therapists who reported higher attachment anxiety would have significantly higher mentalization scores when they demonstrated higher performance-based cognitive flexibility and therapists who reported higher attachment anxiety would have significantly lower mentalization scores when they demonstrated lower performance-based cognitive flexibility.

5. In the negative valence condition of the ECST, there would be a significant moderating effect of therapist performance-based cognitive flexibility on the relationship between therapist attachment anxiety and therapist mentalization, such that therapists who reported higher attachment anxiety would have significantly higher mentalization scores when they demonstrated higher performance-based cognitive flexibility and therapists who reported higher attachment anxiety would have significantly lower mentalization scores when they demonstrated lower performance-based cognitive flexibility.

Exploratory Questions

1. Would self-report, neuropsychological task, and observer rating perspectives of cognitive flexibility (as measured by the CFS, ECST, and exploratory measure) be significantly correlated with one another?

2. Would there be a significant moderating effect of therapist cognitive flexibility on the relationship between therapist attachment avoidance and therapist mentalization in any of the three valence conditions of the ECST?

3. Would there be a significant moderating effect of therapist observer-rated cognitive flexibility on the relationship between therapist attachment anxiety and therapist mentalization, such that therapists who reported higher attachment anxiety would have significantly higher mentalization scores when they exhibited higher cognitive flexibility and therapists who reported higher attachment anxiety would have significantly lower mentalization scores when they exhibited lower cognitive flexibility?

IV. Method

Participants

The total number of participants recruited for the present study was 256 (excluding participants from the pilot study, described below). The sample included clinical psychologists, counseling psychologists, marriage and family therapists, social workers, and school psychologists with clinical experience. Participants were recruited from various universities, training programs, and clinics around the United States, using training program directories, listservs, and word of mouth. Participants who completed the study had the opportunity to enter a raffle to win one of four $100 Amazon gift cards. To be eligible to participate, participants were required to be at least 18 years old.

Of the original sample of $N = 256$, 54 (21%) participants were eliminated because they dropped out prior to completing the study. Specifically, they stopped before the end of the protocol. Out of the remaining sample of $N = 202$, 5 (2.5%) participants were eliminated due to not meeting inclusion criteria. Six (3%) participants were eliminated because, although they responded to each of the measures in the study, they had too many missing items. Seven (3.5%) participants were eliminated because they reported inconsistent data (e.g., they contradicted themselves in their answers). Six (3%) participants were eliminated due to having completion times of ≤ 7 minutes on the self-report measures. This cutoff was determined based on the distribution of the data and the expectation that participants would need at least 7 minutes to complete these scales. Four outlying data points were identified for 3 (1.5%) participants. Box plots, histograms, and stem and leaf graphs were used to evaluate the outliers. Based on this, it was determined that they were not so divergent from the rest of the sample to warrant eliminating them.

Thus, they were left in the sample. Finally, 20 (9.9%) participants were excluded from the main analyses due to unusual scores on the ECST. These participants had unusually high scores compared to the rest of the present sample. Additionally, they scored more than 2 standard errors higher than previously reported means (Cerny et al., 2019) on all three valence conditions of the ECST. These unusually high scores across valence conditions suggested fatigue effects, in which participants may have been simply "clicking through" the task as opposed to giving it a genuine effort, invalidating their responses. This left a final sample of $N = 158$ for hypothesis testing.

The final sample consisted of 23 (14.6%) men and 129 (81.6%) women. Five (3.2%) participants reported "Other" as their gender and 1 (0.6%) participant reported "Prefer not to say." In terms of racial composition, 64 participants (40.6%) were non-White. Specifically, 26 (16.5%) participants identified as Asian, 6 (3.8%) identified as Black, 5 (3.2%) identified as Latino/Latina/Latinx, and 27 (17.1%) identified as "Other." Most participants in the "Other" category identified as multiracial, Middle Eastern, or North African. The majority of the sample ($n = 106$; 67.1%) identified as heterosexual. In addition to this, a variety of other sexual orientations were represented, including homosexual, bisexual, queer, and pansexual. Most participants ($n = 93$; 58.9%) were in the field of Clinical Psychology, with Social Work being the second largest category ($n = 29$; 18.4%). The age of the sample ranged between 23-75 ($M = 32.47$, $SD = 9.04$). The total number of patients treated by the sample ranged between 1-9,360 ($M = 233.06$, $SD = 1,071.65$). The total number of clinical hours reported by the sample ranged between 8-40,500 ($M = 3,126.40$, $SD = 5,132.33$). See Table 1 and 2 for a summary of sample demographics.

Table 1

Demographic Characteristics of the Sample (N =158)

Variable	*n (%)*
Gender	
Male	23 (14.6)
Female	129 (81.6)
Other	5 (3.2)
Prefer not to say	1 (0.6)
Race/Ethnicity	
Asian	26 (16.5)
Black	6 (3.8)
Latino/Latina/Latinx	5 (3.2)
White	91 (57.6)
Other	27 (17.1)
Prefer not to say	3 (1.9)
Sexual Orientation	
Bisexual	31 (19.6)
Heterosexual	106 (67.1)
Homosexual	4 (2.5)
Other	10 (6.3)
Prefer not to say	7 (4.4)
Chosen Field	
Clinical Psychology	93 (58.9)
Counseling Psychology	22 (13.9)
Marriage and Family Therapy	10 (6.3)
Social Work	29 (18.4)
School Psychology	4 (2.5)

Table 2

Demographic Characteristics of the Sample cont. (N =158)

Variable	*n*	*Range*	*M*	*SD*
Age	158	23-75	32.47	9.04
Total Number of Patients Treated	154	1-9360	233.06	1071.65
Total Hours of Clinical Work	148	8-40500	3126.40	5132.33

Recruitment

Prior to recruitment, a power analysis using G*Power (Faul et al., 2007) was conducted using the following inputs: (1) Test family = *F* tests, (2) Statistical test = linear multiple regression: Fixed model, R^2 deviation from zero, (3) Type of power analysis = A priori: compute required sample size – given α, power, and effect size. The analysis suggested a total sample size of 68 to have power = 0.80, $\alpha = 0.05$, and a moderate effect size of $f^2 \geq 0.15$. Oversampling was used to help mitigate the potential of missing data and participant dropout. It was planned that participants would be 200 English-speaking therapists. To increase the chances of achieving maximum therapist recruitment, the authors considered the findings summarized below from the literature about therapists.

Therapists are known to have limited participation in research and this is acknowledged in the literature as well. Focus group and qualitative interview studies have found that therapists are hesitant to participate in research due to various factors, including skepticism about its value or relevance to clinical practice, lack of time, and lack of motivation (Halvorsen et al., 2020; Safran et al., 2011; Widdowson, 2012). One survey study asking 1,019 clinicians (951 of whom were currently practicing) about what they want from research, found that therapeutic relationships/mechanisms of change, therapist factors, and training and professional development were the top three research topics identified as most important and most relevant to their clinical practice (Tasca et al., 2014). In an exploratory focus group study, Widdowson (2012) investigated the attitudes and perceptions of 16 psychotherapy trainees about psychotherapy research and what might encourage research participation. Based on their responses, Widdowson

recommends the following: (1) be clear about the level of commitment (e.g., time) required to participate in the research, (2) communicate how therapists and their patients might benefit from them participating in the research, and (3) prioritize ease of participation when designing the study (Widdowson, 2012).

Based on the above recommendations, the authors attempted to address therapist skepticism about research, lack of time, and lack of motivation by (1) developing a convenient, online design that participants would be able to self-administer in approximately 30 minutes total, on their own schedule, in the comfort of their own home or office, and (2) investigating variables and research questions that address what were identified by Tasca et al. (2015) as the top three research topics practicing clinicians want to learn more about (therapeutic relationships/mechanisms of change, therapist factors, and training and professional development). These points were emphasized to prospective participants during the recruitment process (without being overly transparent about what exactly was being studied). In order to increase the chances of recruiting insecurely attached therapists, the investigator (1) emphasized (in the recruitment email) the study's interest in therapists who are struggling with a difficult patient(s), (2) included therapists who were still in their early years of clinical training and thus more likely than seasoned clinicians to drop out of the field due to struggles with the challenging nature of clinical work, and (3) recruited therapists from a wide range of clinical disciplines, with varying barriers to entry.

Participants were initially identified via the use of directories from the Council on Counseling and Counseling Related Educational Programs (CACREP), the Association for Psychology Postdoctoral and Internship Centers (APPIC), the American

Psychological Association (APA), the National Association of School Psychologists (NASP), the Counsel on Social Work Education (CSWE), and the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE). The investigator emailed program training directors, asking them to share the recruitment email seeking participation in the present study. This email contained the study's Qualtrics weblink. Studies using this outreach method have typically obtained sample sizes above our targeted size. To recruit racially and culturally diverse participants, the investigator reached out to the following ethnic minority psychological associations: American Arab, Middle Eastern, and North African Psychological Association, Asian American Psychological Association, Association of Black Psychologists, National Latina/o Psychological Association, and Society of Indian Psychologists. The following newsletters were also contacted about the possibility of posting the recruitment email of the present study: *Asian American Psychologist*, *Psych Discourse*, and *Latina/o Psychology Today*. Upon approval from listserv administrators, the author posted the recruitment email to the following listservs: LIU-Brooklyn PhD Program in Residence, COUNSGRADS (for graduate students in Counseling across the country), APAGS (American Psychological Association of Graduate Students) and NY State Society for Clinical Social Work. The author also posted to the Student Doctor Network online forum, which permits posting of IRB-approved projects: https://forums.studentdoctor.net/forums/psychology-psy-d-ph-d.57/

The investigator also emailed his contacts in the field, including individual graduate students, professors, or supervisors at various academic programs, and asked them to forward the recruitment email to other potential participants who met the

inclusion criteria. Finally, to further incentivize participation and completion of the study, participants were entered into a raffle to win one of four $100 Amazon gift cards if they filled out all measures completely. Once the study was completed, four names were randomly selected from the pool of raffle participants and a $100 Amazon gift card was sent to each winner.

Measures

Demographics Questionnaire

The demographics questionnaire assessed age, gender, ethnicity, race, sexual orientation, number of patients treated in psychotherapy, and hours of clinical work.

Experiences in Close Relationships Scale - Revised

The Experiences in Close Relationships Scale - Revised (ECR-R; Fraley et al., 2000) is a 36-item self-report measure that consists of an attachment anxiety subscale and an attachment avoidance subscale. Both yield a mean score, with higher values signifying greater attachment insecurity. Items are rated on a 7-point Likert scale from *strongly disagree* (1) to *strongly agree* (7). The anxiety subscale had an internal consistency of .94 and a test-retest reliability of .90 in a sample of 1,083 undergraduate students (Fraley et al., 2000). No studies until the present have demonstrated validity or reliability of the ECR-R in a therapist sample. However, the Experiences in Close Relationships Scale (ECR; Brennan et al., 1998) (an earlier version of the ECR-R, based on the same item pool) was reported to have internal consistency estimates of .94 and .92 for Avoidance and .90 and .91 for Anxiety in a sample of counselor trainees (Mohr et al., 2005). The ECR was also found to have correlations with other measures of adult attachment and sexual feelings in the expected directions, providing evidence for validity (Brennan et al.,

1998; Mohr et al., 2005). Finally, in the present study sample, both the anxiety subscale and the avoidance subscale of the ECR-R had an excellent internal consistency (ECR-R Anxiety Cronbach's $\alpha = .92$; ECR-R Avoidance Cronbach's $\alpha = .94$).

Cognitive Flexibility Scale

The Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995) is a 12-item self-report measure of cognitive flexibility in regard to how it relates to effective communication. The following aspects of cognitive flexibility are measured: awareness of communication alternatives, willingness to adapt to the situation, and self-efficacy in responding flexibly. It yields a total score that can range between 10 and 72. Items 2, 3, 5, and 10 are reverse-scored. Higher scores indicate higher cognitive flexibility. It showed a test-retest reliability of .83 in two college samples of over 200 students each. The CFS has shown adequate convergent validity with another self-report measure, the Cognitive Flexibility Inventory (Johnco et al., 2014). It was found to have an internal consistency of .80 in a sample of 78 counseling trainees (Martinez & Dong, 2020). In the present sample, this measure demonstrated good internal consistency (CFS Cronbach's $\alpha = .81$).

Beck Depression Inventory - Second Edition

The Beck Depression Inventory - Second Edition (BDI-II; Beck et al., 1996) is a 21-item self-report measure that assesses cognitive, somatic, and behavioral aspects of depression. Each item contains four statements and participants choose which one best describes the way they have been feeling over the past two weeks. Item scores are summed to yield a total score ranging from 0-63, with higher scores representing more serious depression. The measure's internal consistency was .92 in a sample of college students and its convergent validity was supported, with scores found to significantly

positively correlate with measures of depressive and anxious symptoms (Storch et al., 2004). In the present sample, the measure's internal consistency was excellent (BDI-II Cronbach's $\alpha = .92$).

Reflective Functioning Scale

The reflective functioning scale (RFS; Fonagy et al., 1998) is a transcript-based measure, in which interview narratives, typically taken from the Adult Attachment Interview (AAI; George et al., 1985), are rated on an 11-point scale from -1 (*rejection of RF*) to 9 (*exceptional RF*), with a score of 5 representing *ordinary reflective functioning*. The scale assesses participants based on four characteristics of RF: (1) an understanding of the nature of mental states (e.g., the opaqueness of mental states), (2) efforts made to tease out mental states that might underlie behavior (e.g., a recognition of diverse perspectives), (3) a recognition of the developmental aspects of mental states (i.e., mental states can change over time) and (4) a demonstrated appreciation of mental states in the "here and now" (e.g., attunement to how what one is saying might be coming across to the interviewer) (Fonagy et al., 1998). Use of the RFS involves trained raters who are required to demonstrate inter-rater reliability of at least .70, using pre-existing AAI transcripts (Cologon et al., 2017). Although initially designed to be used in conjunction with the AAI, the RFS has also been used to code other narrative material (Barreto & Matos, 2018; H. Steele, personal communication, May 5, 2021). In the present study, the RFS was used to code Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969) narratives for therapist reflective functioning. Interrater reliability was assessed according to the guidelines by Koo and Li (2016). In the present sample, the inter-rater reliability was good (ICC = .78).

Five-Minute Speech Sample. The Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969) is a method of eliciting verbal narratives for the purpose of assessing for psychological states. Participants are asked to speak for five minutes in response to a prompt from an interviewer. The five-minute monologue is recorded and coded. The FMSS has been most commonly coded for "expressed emotion" (EE), the attitudes and feelings that a relative expresses about a patient (Magaña et al., 1986). More recently, in an unpublished manual, Adkins and Fonagy (2016) tested an intervention aimed at improving mentalizing skills in foster and adoptive parents. Part of this project required them to develop an expedient and cost-effective measure of reflective functioning, which led them to create a new FMSS protocol designed to be coded for reflective functioning in parents, using the Reflective Functioning Scale (RFS; Fonagy et al., 1998). The validity of their FMSS-RF protocol was not assessed. However, their FMSS protocol did detect change over time in parents' reflective functioning after receiving the intervention. The authors also assessed inter-rater reliability using a two-way mixed intra-class correlation coefficient (ICC), which yielded an excellent range, ICC = .85. With the exception of this project and the present study, there have been no other studies that used the RFS to code the FMSS.

For the present study, the author developed an online version of the FMSS to be included as a "text entry question" among the other questions/measures in the Qualtrics protocol. The online version utilized a written prompt and required participants to type their responses into a response box instead of record them into a recorder. This eliminated the need for an interviewer and transcription and allowed the FMSS to be self-administered like the other measures in the Qualtrics protocol. In the present study, the

FMSS was also coded for therapist cognitive flexibility, using an exploratory measure developed by the author, which is described in detail in Appendix E.

Emotion Card Sort Test

The Emotion Card Sort Test (ECST; Deveney & Deldin, 2006) is a computerized neuropsychological task that requires participants to match a target card with one of four key cards based on color, font, and number of words on the card. After each response, participants are told whether their selection was correct or not. After 10 consecutive correct matches, the matching rules shift without warning and participants begin to receive feedback based on the new rule. The test is split into three rounds: positive valence, negative valence, neutral. Each round is terminated either when participants correctly sorted to six different rules (color, font, and number of words rules are repeated twice) or when all cards in the set were used. There is a maximum of 88 cards per round. Cognitive flexibility is assessed per round by number of perseverative errors made, with a higher number of errors indicating decreased skill. The authors of this measure (Deveney & Deldin, 2006) did not report reliability or validity data in their study. The only other study that has used this measure also did not report reliability or validity data (Cerny et al., 2019).

Procedure

Using the recruitment channels discussed above (e.g., directories, personal contacts, etc.), the author obtained prospective participant email addresses and created a list for an email blast. Participants on the list were sent an email with a brief description of the study, a message about the opportunity to win one of four $100 Amazon gift cards, and a Qualtrics weblink. The Qualtrics weblink contained a forced-response consent form

and age (18 or older) verification field and the following measures: Demographics form, Experiences in Close Relationships Scale - Revised (ECR-R), Cognitive Flexibility Scale (CFS), Beck Depression Inventory - Second Edition (BDI-II), Five-Minute Speech Sample (FMSS), and an external Testable.org link to the Emotion Card Sort Test (ECST). Everything in the Qualtrics link was presented in the above order, in the same format and order to all participants. Participants received clear instructions for how to complete each measure. At the end of the study, participants were given a debriefing form describing the purpose and importance of the study in more detail and information on how to seek psychological help if the study caused distress. Participants were able to withdraw from the study at any time.

In the present study, 158 FMSS narratives were coded for reflective functioning by two certified reliable RFS coders using the RFS coding manual (Fonagy et al., 1998). This is the same approach used by Adkins and Fonagy (2016), but the present study was the first study to adapt this approach to code FMSS narratives of therapists, specifically. At the beginning of the coding timeline, coders double coded five narratives from the sample. They then met once to (1) discuss their ratings of these five narratives, (2) resolve any discrepancies by deciding the best application of the RFS manual in these instances, (3) reach 100% reliability for these five narratives (by coding any with discrepancies together) and (4) reach a consensus about how they would apply the RFS coding manual most accurately and how they would approach the coding of the subsequent narratives based on their discussion and consensus regarding these first five narratives. After this initial meeting, both coders double coded 25% (n = 41) of the total narratives to be analyzed for interrater reliability. Of the remaining narratives (n = 117),

each coder independently coded about half (one coder coded 58 narratives and the other coder coded 59). Interrater reliability was assessed according to the guidelines by Koo and Li (2016). A two-way random effects, average measures intra-class correlation coefficient (ICC) was used, which yielded reliability within the good range, ICC = .78.

As an exploratory aspect of the study, a coding system was developed by the author (see Appendix A) to be used to code FMSS narratives for markers of flexibility. The following two items were used for the coding: (1) “the ability to adjust to new situations” and (2) “the capacity to switch between perspectives or modes of thinking”. These items were chosen, because they represent the main characteristics of cognitive flexibility (Gündüz, 2013; Zmigrod et al., 2020). These items were rated on a 3-point scale from 0 (*not present*) to 2 (*very present*), with a score of 1 indicating that flexibility was present but not particularly elaborated and/or not the most salient theme in the narrative (see Appendix E for more details, including coding procedures).

Data Analytic Plan

Analyses were completed using IBM SPSS Statistics Software version 22.0. Descriptive variables were analyzed and the data were assessed for normality. Data were considered normal if the skew and kurtosis values were between -1.5 and 1.5. Missing data were assessed. Little's MCAR test was used to determine whether data were missing completely at random (MCAR). The data of participants who had more than 10% missing on a given measure were removed from analyses. For participants who had less than 10% of missing data on a given measure, means were imputed. Measures were tested for reliability within the sample. Cronbach's alpha values of .7 or above were considered adequate. Associations between demographic variables and outcome variables were

tested using analysis of variance, Pearson correlations, and *t*-tests with the plan to control for any significant covariates in subsequent main analyses. Hypotheses 1 and 2 were tested using simple Pearson correlations. Hypotheses 3-5 and Exploratory Questions 2-3 were tested using Hayes' (2022) PROCESS Macro version 4.1, Moderation Model 1. The analyses yielded an estimate of variance in therapist mentalization predicted by therapist attachment insecurity and therapist cognitive flexibility, and an unstandardized coefficient between independent and dependent variables. Results were also interpreted according to effect size to determine the magnitude of the findings. For Exploratory Question 1, a convergent validity analysis was conducted using a Spearman's Rho correlation for the three different cognitive flexibility measures (CFS, ECST, Exploratory).

V. Results

Preliminary Analyses and Descriptive Statistics

The final study sample was $N = 158$. To evaluate missing data, a MVA was run and Little's MCAR test found that the data were missing completely at random ($\chi^2 = 62.19$, $df = 54$, $p = .21$). Scales with missing data are reported in Table 3. Scales with more than 10% of items missing were not scored for participants. In all other cases mean substitution was used to impute missing values. Thus, the sample size varied across measures. Out of the final sample of $N = 158$, not all participants completed the FMSS and/or the ECST. Of the participants who had valid data (i.e., met inclusion criteria, not too many scales missing, data was consistent, reasonable/realistic completion times), 129 participants completed the FMSS and 99 completed the ECST.

Descriptive statistics for the main study variables are reported in Table 4. With the exception of depression and cognitive flexibility as measured by the ECST (all valence conditions), all variables' skew and kurtosis were between 1 and -1, indicating that they were adequately normally distributed. Depression and ECST cognitive flexibility were slightly skewed and kurtotic. However, these variables were considered "count variables" (BDI scores represent a weighted count of depressive symptoms and ECST scores represent a count of perseverative errors). Thus, it was expected that these variables would be slightly skewed and kurtotic since most scores were expected to be 0 or close to 0. For these reasons, no attempts were made to normalize these data.

The current sample was compared to other samples on the ECR-R (Table 5). Compared to ECR norms reported by Fraley, Waller, and Brennan (2000),

Table 3

Extent of Missing Data on Study Measures (N=158)

Scale	Total Items	Required Items	Sufficient Data *N*	Missing Data *n* (%)
ECR-R	36	33	157	1 (0.6)
CFS	12	11	158	0 (0.0)
BDI-II	21	19	150	8 (5.1)
FMSS	1	1	129	29 (18.4)
ECST	1	1	99	59 (37.3)

Note. ECR-R = Experiences in Close Relationships Scale – Revised (Fraley et al., 2000); CFS = Cognitive Flexibility Scale (Martin & Rubin, 1995); BDI-II = Beck Depression Inventory – Second Edition (Beck et al., 1996); FMSS = Five-Minute Speech Sample (Gottschalk & Gleser, 1969); ECST = Emotion Card Sort Task (Deveney & Deldin, 2006).

Table 4

Means, Standard Deviations, Skew, and Kurtosis Statistics for Variables (N =158)

	N	Min	Max	Mean	SD	Skew (SE)	Kurt (SE)
Attachment Anxiety	157	1.00	6.28	2.84	1.06	0.38 (0.19)	-0.12 (0.39)
Attachment Avoidance	158	1.06	5.94	3.02	1.06	0.45 (0.19)	-0.31 (0.38)
Cognitive Flexibility (Self-Report)	158	40.00	72.00	58.76	6.33	-0.31 (0.19)	0.12 (0.38)
Cognitive Flexibility ($ECST^1$)	99	0.00	31.00	5.18	5.71	1.64 (0.24)	3.57 (0.48)
Cognitive Flexibility ($ECST^2$)	99	0.00	38.00	6.85	7.47	1.78 (0.24)	3.42 (0.48)
Cognitive Flexibility ($ECST^3$)	99	0.00	29.00	5.31	6.48	1.74 (0.24)	2.57 (0.48)
Mentalization	129	1.00	7.50	4.26	1.30	0.05 (0.21)	-0.19 (0.42)
Depression	150	0.00	48.00	9.80	8.71	1.51 (0.20)	3.00 (0.39)
Cognitive Flexibility (Exploratory)	129	0.00	2.00	1.26	0.62	-0.22 (0.21)	-0.57 (0.42)

Note. Attachment Anxiety and Attachment Avoidance were measured using the Experiences in Close Relationships Scale – Revised (ECR-R; Fraley et al., 2000); Cognitive Flexibility (Self-Report) = Cognitive Flexibility as measured by the Cognitive Flexibility Scale (Martin & Rubin, 1995); Cognitive Flexibility (ECST) = Cognitive Flexibility as measured by perseverative errors in response to neutral/negative/positive stimuli on the Emotion Card Sort Task (Deveney & Deldin, 2006): $ECST^1$ = Neutral Valence Condition, $ECST^2$ = Negative Valence Condition, $ECST^3$ = Positive Valence Condition; Mentalization was measured using the Reflective Functioning Scale (Fonagy et al., 1998) applied to the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969); Depression was measured using the Beck Depression Inventory – Second Edition (BDI-II; Beck et al., 1996); Cognitive Flexibility (Exploratory) = Cognitive Flexibility as measured by the exploratory observer-rated measure developed by the author.

Table 5

Comparison of Attachment Anxiety and Avoidance Scores from Different Studies

Author(s)	ECR Anxiety *M* (*SD*)	ECR Avoidance *M* (*SD*)
Fraley, Waller, and Brennan (2000)[a]	3.56 (1.12)	2.92 (1.19)
Cologon et al. (2017)	3.47 (0.69)	3.75 (0.82)
Current Study	2.84 (1.06)	3.02 (1.06)

Note. ECR = Experiences in Close Relationships– Revised (ECR-R; Fraley et al., 2000).
[a] Normative data

the current sample showed significantly lower attachment anxiety scores (M = 2.84, SD = 1.06) than the mean reported (M = 3.56), t (156) = -8.52, p < .001. The current sample's mean attachment anxiety score was also significantly less than the mean found in a therapist sample by Cologon et al. (2017), which was 3.47 (SD = 0.69). The present sample did not differ significantly from norms for the ECR avoidance subscale (Fraley et al., 2000), t (157) = 1.20, p = .23.

Intercorrelations of the main variables can be found in Table 6. Mentalization, which was measured using the Reflective Functioning Scale (Fonagy et al., 1998) applied to the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969), was negatively correlated with attachment avoidance but not with attachment anxiety or depression. Mentalization was negatively correlated with perseverative errors for both positive and negative stimuli. Attachment anxiety and avoidance were correlated positively, as expected. Attachment anxiety and avoidance were both negatively correlated with self-reported cognitive flexibility. The self-report measure of cognitive flexibility (CFS; Martin & Anderson, 1998) and the neuropsychological measure of cognitive flexibility (ECST; Deveney & Deldin, 2006) were not significantly correlated, indicating that the two measurement perspectives captured different aspects of cognitive flexibility. The number of perseverative errors in the neutral condition of the ECST was positively correlated with the number of perseverative errors in the negative condition of the ECST. The number of perseverative errors in the negative condition of the ECST was positively correlated with the number of perseverative errors in the positive condition of the ECST. There was no association between number of perseverative errors in the neutral condition of the ECST and number of perseverative errors in the positive condition of the ECST.

Table 6

Correlations Among Main Study Variables (n = 129)

Variable	1	2	3	4	5	6	7	8	9
1.Mentalization	-	-.14	-.18*	.00	.16	-.05	-.24*	-.21*	.27**
2.Attachment Anxiety		-	50**	.46**	-.61**	.04	.08	.09	.16
3.Attachment Avoidance			-	.33**	-.37**	-.02	.05	.08	-.05
4.Depression				-	-.32**	.09	.14	.17	.09
5.Cognitive Flexibility (Self-Report)					-	-.05	-.02	-.09	.07
6.Cognitive Flexibility ($ECST^1$)						-	.38**	.18	.10
7.Cognitive Flexibility ($ECST^2$)							-	.37**	-.06
8.Cognitive Flexibility ($ECST^3$)								-	-.10
9. Cognitive Flexibility (Observer-Rated)									-

Note. Attachment Anxiety and Attachment Avoidance were measured using the Experiences in Close Relationships Scale – Revised (ECR-R; Fraley et al., 2000); Cognitive Flexibility (Self-Report) = Cognitive Flexibility as measured by the Cognitive Flexibility Scale (Martin & Rubin, 1995); Cognitive Flexibility (ECST) = Cognitive Flexibility as measured by perseverative errors in response to neutral/negative/positive stimuli on the Emotion Card Sort Task (Deveney & Deldin, 2006): $ECST^1$ = Neutral Valence Condition, $ECST^2$ = Negative Valence Condition, $ECST^3$ = Positive Valence Condition; Mentalization was measured using the Reflective Functioning Scale (Fonagy et al., 1998) applied to the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969); Depression was measured using the Beck Depression Inventory – Second Edition (BDI-II; Beck et al., 1996); Cognitive Flexibility (Observer-Rated) = Cognitive Flexibility as measured by the exploratory, observer-rated measure developed by the author.
*$p \leq .05$,
**$p \leq .01$.

Covariate Analyses

The following possible covariates were tested for association with the outcome variable, mentalization: gender, race, age, total number of patients treated, field of study, total number of hours of clinical work, and depression. Pearson correlations showed that neither age, total number of patients treated, total number of hours of clinical work, nor depression were associated with mentalization (Table 7). A one-way ANOVA testing for differences in mentalization by gender showed no significant difference (i.e., no association), $F(2, 125) = 0.81$, $p = .45$. A one-way ANOVA testing for differences in mentalization by race showed no significant difference (i.e., no association), $F(5, 123) = 1.13$, $p = .65$. A one-way ANOVA testing for differences in mentalization by field of study was conducted and showed no significant differences, $F(4, 124) = 1.13$, $p = .35$. Therefore, these variables were not used as covariates in the main analyses. Finally, an independent samples *t*-test was run to test for differences in scores on all measures between White and non-White participants. A significant difference in CFS scores was found between White and Non-White participants, $t(156) = 2.48$, $p = .01$. On average, White participants rated themselves higher ($M = 59.81$, $SD = 6.24$) than Non-White participants ($M = 57.33$, $SD = 6.21$). In regard to the remaining measures, no significant differences were found (see Table 8).

Hypothesis Testing

Hypothesis 1

A Pearson correlation was conducted to test whether there was a significant negative effect of therapist attachment anxiety on therapist mentalization. Results showed

Table 7

Correlations Between Potential Covariates and Mentalization

Variable	*n*	*r*	*p*
Age	129	-.05	.55
Total number of patients	127	.01	.87
Total number of clinical hours	123	-.01	.92
BDI	129	.00	.99

Note. BDI = Depression as measured by the Beck Depression Inventory – Second Edition (Beck et al., 1996).

Table 8

Independent Samples t-Tests Comparing White and Non-White Participants (N = 158)

Variable	*t*	*df*	*p*	Mean Difference	Std. Error Difference
Mentalization	0.83	127	.41	0.19	0.23
Attachment Anxiety	-1.22	155	.22	-0.21	0.17
Attachment Avoidance	-0.03	156	.98	-0.00	0.17
Depression	0.27	148	.79	0.38	1.45
Cognitive Flexibility (Self-Report)	2.48	156	.01**	2.48	1.00
Cognitive Flexibility ($ECST^1$)	0.66	97	.51	0.77	1.17
Cognitive Flexibility ($ECST^2$)	0.70	97	.49	1.06	1.52
Cognitive Flexibility ($ECST^3$)	-1.26	97	.21	-1.65	1.31

Note. Attachment Anxiety and Attachment Avoidance were measured using the Experiences in Close Relationships Scale – Revised (ECR-R; Fraley et al., 2000); Cognitive Flexibility (Self-Report) = Cognitive Flexibility as measured by the Cognitive Flexibility Scale (Martin & Rubin, 1995); Cognitive Flexibility (ECST) = Cognitive Flexibility as measured by perseverative errors in response to neutral/negative/positive stimuli on the Emotion Card Sort Task (Deveney & Deldin, 2006): $ECST^1$ = Neutral Valence Condition, $ECST^2$ = Negative Valence Condition, $ECST^3$ = Positive Valence Condition; Mentalization was measured using the Reflective Functioning Scale (Fonagy et al., 1998) applied to the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969); Depression was measured using the Beck Depression Inventory – Second Edition (BDI-II; Beck et al., 1996).
**$p \leq .01$.

that there was no significant negative association between attachment anxiety and mentalization, r (128) = -.14, p = .10, which indicates that one's level of anxiety about close relationships was not related to the ability to understand others' mental states. Hypothesis 1 was not supported and the effect size was small, with attachment anxiety explaining only 2.0% of the variability in mentalization.

Hypothesis 2

A Pearson correlation was conducted to test whether there was a significant negative effect of therapist attachment avoidance on therapist mentalization. Results showed that there was a significant negative association between attachment avoidance and mentalization, r (129) = -.18, $p < .05$, indicating that as one's avoidance in close relationships increased, one's ability to understand others' mental states decreased. Hypothesis 2 was supported. The effect size was small, with attachment avoidance explaining 3.2% of the variability in mentalization.

Hypothesis 3

A multiple regression using Process Macro v 4.1 (Hayes, 2022) was conducted to test whether there was a significant moderating effect of therapist self-reported cognitive flexibility on the relationship between therapist attachment anxiety and therapist mentalization. The interaction effect was significant, B = -.03, t = -2.02, $p < .05$, showing that there was a significant moderation. However, the direction of the effect was contrary to what was predicted. It was predicted that therapists who reported higher attachment anxiety would have significantly higher mentalization scores when they reported higher cognitive flexibility and therapists who reported higher attachment anxiety would have significantly lower mentalization scores when they reported lower cognitive flexibility.

Contrary to this prediction, the results showed that when self-reported cognitive flexibility was high, the relationship between attachment anxiety and mentalization was negative. At high self-reported cognitive flexibility, the slope was -0.29 (p = .07), while at low and average self-reported cognitive flexibility the slopes were 0.09 (p = .58) and -0.10 (p = .43) (Figure 1). Neither of the main effects of attachment anxiety or cognitive flexibility were significant. The interaction accounted for 3.1% of the variability in mentalization, R^2change = .03, $F(1,124) = 4.08$, p = .04. Finally, the percent of variance explained by the entire model was 6.0%, but this was not significant, p = .052. Hypothesis 3 was not supported (Table 9).

Hypothesis 4

A multiple regression using Process Macro v 4.1 (Hayes, 2022) was conducted to test whether, in the positive valence condition of the ECST, there was a significant moderating effect of therapist cognitive flexibility (as measured by perseverative errors) on the relationship between therapist attachment anxiety and therapist mentalization. The interaction effect was not significant, B = .01, p = .56, showing that there was no significant moderation—the number of perseverative errors in response to positive stimuli did not alter the relationship between anxiety in close relationships and the ability to understand others' mental states; this relationship remained the same at both high and low levels of perseverative errors. The interaction accounted for less than 1% of the variability in mentalization, R^2change = .004, p = .56. There was, however, a significant negative main effect of perseverative errors on mentalization, B = -.04, t = -2.12, p = .04. This effect was such that as the number of perseverative errors increased, the ability to understand others' mental states decreased. In other words, the more cognitively

Figure 1

Effect of Attachment Anxiety on Mentalization at Different Levels of Cognitive Flexibility.

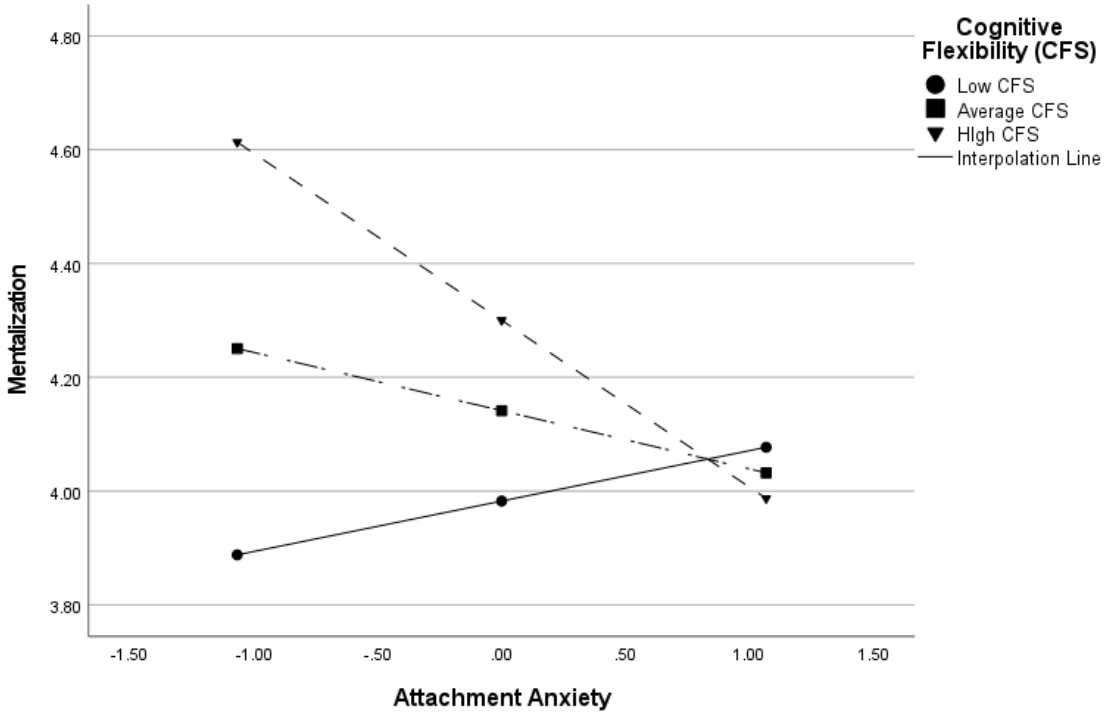

Table 9

Regression Analysis Predicting the Moderating Effect of Therapist Self-reported Cognitive Flexibility on the Relationship between Therapist Attachment Anxiety and Therapist Mentalization (n = 128)

Variable	Coefficients			
	B	*SE B*	*t*	*p*
Constant	4.14	0.13	32.69	<.001
Attachment Anxiety (A)	-0.10	0.13	-0.78	.43
SR Cognitive Flexibility (B)	0.03	0.02	1.15	.25
A x B[a]	-0.03	0.02	-2.02	.04*

Note: R^2 = .06, $F(3, 124) = 2.65$, p = .052; B = unstandardized coefficient; SR Cognitive Flexibility = Self-Reported Cognitive Flexibility as measured by the Cognitive Flexibility Scale (Martin & Rubin, 1995).

[a] R^2_{change} =.03, F_{change} (1, 124) = 4.08, p = .046.

*$p \leq .05$.

inflexible therapists were, the more difficulty they had understanding other's mental states. The main effect of attachment anxiety was not significant, B = -.03, p = .81. The percent of variance explained by the entire model was 5%, but this was not significant, R^2 = .05, p = .19. Hypothesis 4 was not supported (see Table 10).

Hypothesis 5

A multiple regression using Process Macro v 4.1 (Hayes, 2022) was conducted to test whether, in the negative valence condition of the ECST, there was a significant moderating effect of therapist cognitive flexibility (as measured by perseverative errors) on the relationship between therapist attachment anxiety and therapist mentalization. The interaction effect was not significant, B = .02, p = .32, showing that there was no significant moderation— the number of perseverative errors in response to negative stimuli did not affect the relationship between anxiety about close relationships and the ability to understand others' mental states. The interaction accounted for 1% of the variability in mentalization, R^2change = .01, p = .32. There was a significant negative main effect of perseverative errors on mentalization, B = -.04, t = -2.52, p = .01. This effect was such that as the number of perseverative errors increased, the ability to understand others' mental states decreased. In other words, the more cognitively inflexible therapists were, the more difficulty they had understanding other's mental states. The main effect of attachment anxiety was not significant, B = -.01, p = .94. The entire model explained 6.6% of the variance in mentalization, but this was not significant, R^2 = .07, p = .09 (see Table 11). As a result of these findings, Hypothesis 5 was not supported.

Table 10

Regression Analysis Predicting the Moderating Effect of Therapist Cognitive Flexibility, in the Positive Valence Condition on the ECST, on the Relationship between Therapist Attachment Anxiety and Therapist Mentalization (n = 99)

	Coefficients			
Variable	*B*	*SE B*	*t*	*p*
Constant	4.36	0.12	35.78	<.001
Attachment Anxiety (A)	-0.03	0.12	- 0.24	.81
Cognitive Flexibility (ECST[1]) (B)	-0.04	0.02	- 2.12	.04*
A x B[a]	0.01	0.02	0.59	.56

Note: R^2 = .0488, $F(3, 95) = 1.62$, $p = .19$; *B* = unstandardized coefficient; Cognitive Flexibility (ECST[1]) = Cognitive Flexibility as measured by perseverative errors in the positive valence condition of the Emotion Card Sort Task (Deveney & Deldin, 2006).
[a] $R^2_{change} = .004$, $F_{change}(1, 95) = 0.35$, $p = .56$.
* = $p \leq .05$.

Table 11

Regression Analysis Predicting the Moderating Effect of Therapist Cognitive Flexibility, in the Negative Valence Condition on the ECST, on the Relationship between Therapist Attachment Anxiety and Therapist Mentalization (n = 99)

	Coefficients			
Variable	*B*	*SEB*	*t*	*p*
Constant	4.35	0.12	35.97	<.001
Attachment Anxiety (A)	-0.01	0.12	-0.08	.94
Cognitive Flexibility (ECST[1]) (B)	-0.04	0.02	-2.52	.01**
A x B[a]	0.02	0.02	1.01	.32

Note: R^2 = .07, $F(3, 95) = 2.24$, p = .09; B = unstandardized coefficient; Cognitive Flexibility (ECST[1]) = Cognitive Flexibility as measured by perseverative errors in the negative valence condition of the Emotion Card Sort Task (Deveney & Deldin, 2006).
[a] R^2_{change} =.01, F_{change} (1, 95) = 1.01, p = .32.
** $p \leq .01$.

Summary of Results for Primary Hypotheses

Regarding intercorrelations among the main variables, therapists' ability to understand others' mental states was negatively related to their performance on a task that assessed flexible thinking in response to positive and negative stimuli. The more errors therapists made on these tasks the poorer their ability to understand others' mental states. Therapists' anxiety in close relationships and avoidance in close relationships were both negatively related to self-perceived flexibility. The more anxious or avoidant therapists were in close relationships, the less flexible they rated themselves to be. There was no relationship between therapists' self-perceived flexibility and their flexibility on a performance task, suggesting that self-perceived flexibility is not necessarily the same as flexibility in practice. On the flexibility performance task, therapists' performance in response to neutral stimuli was positively related to their performance in response to negative stimuli. Additionally, their performance in response to negative stimuli was positively related to their performance in response to positive stimuli. There was no relationship between their performance in response to neutral stimuli and their performance in response to positive stimuli.

Regarding the main analyses, Hypothesis 2 was supported. Therapists' avoidance in close relationships was negatively related to their ability to understand others' mental states — the more avoidant they were, the more difficulty they demonstrated in their ability to understand others' mental states. Regarding Hypothesis 3, therapists' level of self-perceived cognitive flexibility impacted the relationship between their anxiety in close relationships and their ability to understand others' mental states: therapists who perceived themselves to be highly cognitively flexible demonstrated increased difficulty

understanding others' mental states as their anxiety in close relationships increased. This was contrary to what was predicted. Thus, Hypothesis 3 was not supported.

The remaining hypotheses (1, 4, and 5) were not supported. There was no relationship between therapists' anxiety in close relationships and therapists' ability to understand others' mental states. Therapists' performance on a task that assessed flexible thinking in response to positive stimuli did not impact the relationship between their anxiety in close relationships and their ability to understand others' mental states. Specifically, the relationship between therapists' anxiety in close relationships and their ability to understand others' mental states remained the same for both high and low levels of task performance. Therapists' performance on a task that assessed flexible thinking in response to negative stimuli did not impact the relationship between their anxiety in close relationships and their ability to understand others' mental states. Specifically, the relationship between therapists' anxiety in close relationships and their ability to understand others' mental states remained the same for both high and low levels of task performance.

Exploratory Analyses

Exploratory Question 1

In addition to assessing therapist cognitive flexibility via self-report (CFS; Martin & Rubin, 1995) and perseverative errors (ECST; Deveney & Deldin, 2006), the present study also developed an exploratory observer-rated measure of cognitive flexibility (see Appendix E). Spearman's Rho correlations were conducted to test whether there were significant relationships between observer-rated cognitive flexibility, self-reported cognitive flexibility, and cognitive flexibility as measured by perseverative errors on the

ECST neuropsychological task (Table 12). No significant associations were found. The different rating-perspectives of cognitive flexibility were not related to each other.

Exploratory Question 2

A multiple regression using Process Macro v 4.1 (Hayes, 2022) was conducted to test whether, in the negative valence condition of the ECST, there was a significant moderating effect of therapist cognitive flexibility (as measured by perseverative errors) on the relationship between therapist attachment avoidance and therapist mentalization. The interaction effect was not significant, $B = 0.02$, $p = .29$, showing that there was no significant moderation. In other words, perseverative errors in response to negative stimuli (i.e., inflexibility with negative stimuli) did not affect the relationship between avoidance in close relationships and the ability to understand others' mental states. The interaction accounted for only 1.1% of the variability in mentalization, (R^2change = .01, $p = .29$). The main effect of attachment avoidance was not significant, $B = -0.09$, $p = .41$. The main effect of perseverative errors was significant, $B = -0.04$, $p = .03$. As perseverative errors went up, mentalization capacity went down. The percent of variance explained by the entire model was 7.1%, but this was not significant, $R^2 = .07$, $p = .07$. (See Table 13).

A multiple regression using Process Macro v 4.1 (Hayes, 2022) was conducted to test whether, in the positive valence condition of the ECST, there was a significant moderating effect of therapist cognitive flexibility (as measured by perseverative errors) on the relationship between therapist attachment avoidance and therapist mentalization. The interaction effect was not significant, $B = .02$, $p = .23$, showing that there was no significant moderation — perseverative errors in response to positive stimuli (i.e.,

Table 12

Correlations Between Self-Reported Cognitive Flexibility, Observer-Rated Cognitive Flexibility, and Cognitive Flexibility on a Neuropsychological Task (n = 129)

Variable	1	2
1.Cognitive Flexibility (Self-Report)	-	
2. Cognitive Flexibility (Observer-Rated)	.09	-
3.Cognitive Flexibility ($ECST^1$)	.01	.05
4.Cognitive Flexibility ($ECST^2$)	-.03	-.03
5.Cognitive Flexibility ($ECST^3$)	-.09	.05

Note. Cognitive Flexibility (Self-Report) = Cognitive Flexibility as measured by the Cognitive Flexibility Scale (Martin & Rubin, 1995); Cognitive Flexibility (Observer-Rated) = Cognitive Flexibility as measured by the exploratory, observer-rated measure developed by the author; Cognitive Flexibility (ECST) = Cognitive Flexibility as measured by perseverative errors in response to neutral/negative/positive stimuli on the Emotion Card Sort Task (Deveney & Deldin, 2006): $ECST^1$ = Neutral Valence Condition, $ECST^2$ = Negative Valence Condition, $ECST^3$ = Positive Valence Condition.

Table 13

Regression Analysis Exploring the Moderating Effect of Therapist Cognitive Flexibility, in the Negative Valence Condition of the ECST, on the Relationship between Therapist Attachment Avoidance and Therapist Mentalization (n = 99)

Variable	Coefficients			
	B	*SE B*	*t*	*p*
Constant	4.36	0.12	36.31	<.001
Attachment Avoidance (A)	-0.09	0.11	-0.84	.41
Cognitive Flexibility (ECST[1]) (B)	-0.04	0.02	-2.15	.03*
A x B[a]	0.02	0.02	1.07	.29

Note: R^2 = .0718, $F(3, 95) = 2.45$, $p = .07$; *B* = unstandardized coefficient; Cognitive Flexibility (ECST[1]) = Cognitive Flexibility as measured by perseverative errors in the negative valence condition of the Emotion Card Sort Task (Deveney & Deldin, 2006).
[a] $R^2_{change} = .01$, $F_{change}(1, 95) = 1.15$, $p = .29$.
* $p \leq .05$.

inflexibility with positive stimuli) did not affect the relationship between avoidance in close relationships and the ability to understand others' mental states. The interaction accounted for about 1% of the variability in mentalization, R^2change = .01, p = .23. The main effect of attachment avoidance was not significant, B = -.07, p = .51. The main effect of perseverative errors was significant, B = -.04, p = .03. As perseverative errors increased, mentalization capacity decreased. The percent of variance explained by the entire model was 6.3%, but this was not significant, R^2 = .06, p = .10 (See Table 14).

A multiple regression using Process Macro v 4.1 (Hayes, 2022) was conducted to test whether, in the neutral valence condition of the ECST, there was a significant moderating effect of therapist cognitive flexibility (as measured by perseverative errors) on the relationship between therapist attachment avoidance and therapist mentalization. The interaction effect was not significant, B = -.02, p = .32, showing that there was no significant moderation. As with previous analyses, perseverative errors in response to neutral stimuli (i.e., inflexibility with neutral stimuli) did not affect the relationship between avoidance in close relationships and the ability to understand others' mental states. The interaction accounted for 1% of the variability in mentalization, R^2change = .01, p = .32. The main effect of attachment avoidance was not significant, B = -.08, p = .48. The main effect of perseverative errors was not significant, B = -.01, p = .57. The percent of variance explained by the entire model was 2%, but this was not significant, R^2 = .02, p = .59 (see Table 15).

Exploratory Question 3

A multiple regression using Process Macro v 4.1 (Hayes, 2022) was conducted to test whether there will be a significant moderating effect of observer-rated cognitive

Table 14

Regression Analysis Exploring the Moderating Effect of Therapist Cognitive Flexibility, in the Positive Valence Condition of the ECST, on the Relationship between Therapist Attachment Avoidance and Therapist Mentalization (n = 99)

	Coefficients			
Variable	*B*	*SEB*	*t*	*p*
Constant	4.36	0.12	36.06	<.001
Attachment Avoidance (A)	-0.07	0.11	-0.66	.51
Cognitive Flexibility ($ECST^2$) (B)	-0.04	0.02	-2.23	.03*
A x B[a]	0.02	0.02	1.21	.23

Note: $R^2 = .06$, $F(3, 95) = 2.14$, $p = .10$; *B* = unstandardized coefficient; Cognitive Flexibility ($ECST^2$) = Cognitive Flexibility as measured by perseverative errors in the positive valence condition of the Emotion Card Sort Task (Deveney & Deldin, 2006).

[a] $R^2_{change} = .01$, $F_{change}(1, 95) = 1.45$, $p = .23$.

* $p \leq .05$.

Table 15

Regression Analysis Exploring the Moderating Effect of Therapist Cognitive Flexibility, in the Neutral Valence Condition of the ECST, on the Relationship between Therapist Attachment Avoidance and Therapist Mentalization (n = 99)

	Coefficients			
Variable	*B*	*SEB*	*t*	*p*
Constant	4.36	0.12	35.41	<.001
Attachment Avoidance (A)	-0.08	0.11	-0.71	.48
Cognitive Flexibility ($ECST^3$) (B)	-0.01	0.02	-0.58	.57
A x B[a]	-0.02	0.02	-1.00	.32

Note: $R^2 = .02$, $F(3, 95) = 0.65$, $p = .59$; *B* = unstandardized coefficient; Cognitive Flexibility ($ECST^3$) = Cognitive Flexibility as measured by the neutral valence condition of the Emotion Card Sort Task (Deveney & Deldin, 2006).
[a] $R^2_{change} = .01$, $F_{change}(1, 95) = 1.01$, $p = .32$.

flexibility on the relationship between therapist attachment anxiety and therapist mentalization, such that therapists who report higher attachment anxiety will have significantly higher mentalization scores when they exhibit higher observer-rated cognitive flexibility and therapists who report higher attachment anxiety will have significantly lower mentalization scores when they exhibit lower observer-rated cognitive flexibility. The interaction effect was not significant, $B = .03$, $p = .86$, showing that there was no significant moderation. In other words, observer-rated cognitive flexibility did not affect the relationship between anxiety in close relationships and the ability to understand others' mental states. The interaction accounted for less than 1% of the variability in mentalization, (R^2change $< .001$, $p = .86$). There was a significant negative main effect of attachment anxiety on mentalization, $B = -.24$, $p = .03$. This effect was such that as anxiety in close relationships increased, the ability to understand others' mental states decreased. The main effect of observer-rated cognitive flexibility was significant, $B = .63$, $p < .01$. This was such that as observer-rated cognitive flexibility increased, the ability to understand others' mental states increased. The percent of variance explained by the entire model was 10.8% and this was significant, $R^2 = .11$, $p < .01$ (Table 16).

Summary of Results for Exploratory Analyses

Exploratory Question 1: No relationship was found between self-perceived cognitive flexibility, cognitive flexibility as observed by others, and cognitive flexibility as measured on a neuropsychological task. Exploratory Question 2: Therapists' performance on a task that assesses flexible thinking in response to positive, negative, and neutral stimuli did not impact the relationship between their avoidance in close

Table 16

Regression Analysis Exploring the Moderating Effect of Observer-rated Therapist Cognitive Flexibility on the Relationship between Therapist Attachment Anxiety and Therapist Mentalization (n = 128)

	Coefficients			
Variable	*B*	*SEB*	*t*	*p*
Constant	4.25	0.11	38.23	< .001
Attachment Anxiety (A)	-0.24	0.11	-2.20	.03*
Cognitive Flexibility (Observer-Rated) (B)	0.63	0.18	3.47	< .001**
A x B[a]	0.03	0.18	0.18	.86

Note: $R^2 = .11$, $F(3, 124) = 5.01$, $p < .001$; *B* = unstandardized coefficient; Cognitive Flexibility (Observer-Rated) = Cognitive Flexibility as measured by the exploratory, observer-rated measure developed by the author.

[a] $R^2_{change} < .001$, $F_{change}\ (1, 124) = 0.33$, $p = .86$.

* $p \leq .05$; ** $p \leq .01$.

relationships and their ability to understand others' mental states. Specifically, the relationship between therapists' avoidance in close relationships and their ability to understand others' mental states remained the same for both high and low levels of task performance. Exploratory Question 3: Therapists' level of cognitive flexibility as rated by others did not impact the relationship between their anxiety in close relationships and their ability to understand others' mental states. In other words, the relationship between therapists' anxiety in close relationships and their ability to understand others' mental states remained the same for both high and low levels of cognitive flexibility as rated by others. However, it was found that, as anxiety in close relationships increased, the ability to understand others' mental states decreased. Additionally, it was found that as other-rated cognitive flexibility increased, the ability to understand others' mental states increased.

VI. Discussion

This was the first empirical study to investigate the role of therapist cognitive flexibility in the relationship between therapist insecure attachment and therapist mentalization. The present study yielded a number of interesting and important findings. First, it was found that therapists' level of attachment avoidance was negatively associated with mentalization capacity, replicating for the first time in a therapist sample what has been found in previous studies on non-therapists (Dimitrijević et al., 2018; Erkoreka & Urrutia, 2023; Fossati et al., 2018; San Cristobal et al., 2017; Sharp et al., 2016). Second, it was found that none of the three different measures of cognitive flexibility were associated with one another; self-report, neuropsychological, and observer-rated measures of cognitive flexibility appeared to be measuring different aspects of cognitive flexibility. This implies that, when measuring cognitive flexibility, the rating perspective will influence the findings. The subsequent discussion will specify which perspective of cognitive flexibility is being discussed and the implications of the different measurement perspectives will be expanded upon. Third, it was found that when self-reported cognitive flexibility was high, increased levels of attachment anxiety led to decreased mentalization capacity. This has important implications for psychotherapy training, which will be discussed in more detail below. Finally, the sample had unique racial, professional, and attachment characteristics that impact the generalizability of the findings and how the findings might be understood. Importantly, one reason why the study did not yield many findings consistent with the literature may have been that the sample was significantly less anxiously attached than the norm and certainly less anxiously attached than the study's target population.

This section will begin with the purpose of the study and will be followed by a discussion of the study's main findings. Limitations of the study are discussed. Future directions for research related to attachment, cognitive flexibility, and mentalization in therapists are proposed.

Purpose of the Study

The theoretical and empirical literature both indicate that therapist mentalization is a central factor contributing to positive psychotherapy process and outcome (Bateman & Fonagy, 2004; Cologon et al. 2017; Fonagy & Allison, 2014; Reading et al., 2019). Skilled mentalizing is typically conceptualized as requiring the ability to be cognitively flexible (e.g., Bateman & Fonagy, 2012; Swenson & Choi-Kain, 2015). The present study was the first that aimed to empirically validate this claim. This is important because identifying and understanding the underlying mechanisms that facilitate skilled mentalizing has the potential to enhance psychotherapy training programs, enabling trainees to improve mentalization in a more targeted and sophisticated way. Improving psychotherapy training in this way has the potential to improve psychotherapy process and outcome.

Studies by Trusty et al. (2005) and Cologon et al. (2017) suggest that insecurely attached therapists have the potential to be effective clinicians, which is inconsistent with the broader attachment literature where insecure attachment has been associated with various negative outcomes, including mentalizing difficulties (Bouchard et al., 2008; Fonagy & Target, 1997; Tanzilli et al., 2021). The studies by Trusty et al. (2005) and Cologon et al. (2017) support the concept of therapists as "wounded healers" (Jung, 1954) whose therapeutic abilities come from their own experiences of pain and suffering

(Zerubavel & Wright, 2012). Based on these two studies and the wounded healer concept, the main prediction of the current study was that therapists with high levels of insecure attachment who are more cognitively flexible would demonstrate better mentalization skills than therapists with high levels of insecure attachment who are less cognitively flexible. To investigate this, psychotherapists from various clinical fields of study, with varying levels of experience, were recruited to take part in a brief online protocol requiring them to complete self-report measures, a written response to a prompt, and a neuropsychological performance task.

Research suggests that the relationship between attachment style and mentalization capacity is influenced by stress and arousal (e.g., Fonagy & Luyten, 2009; Lieberman, 2007; Mayes, 2006; Nolte et al., 2013). A unique aspect of the present study was that it assessed cognitive flexibility and mentalization in response to emotional stimuli on the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006) and the Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969). This addressed a gap in the literature since the roles of attachment style and emotional context had not been considered in previous studies on therapist cognitive flexibility or therapist mentalization.

Finally, former studies on therapist flexibility have primarily measured flexibility by inferring it from therapists' reports about their patients (Lazarus et al., 2019) or the range of interventions they use in session (Goldman et al., 2013, 2018; Katz et al., 2019; Owen & Hilsenroth, 2014). The present study built upon these methods by measuring cognitive flexibility using three different rating perspectives (observer ratings, self-report, and neuropsychological task performance) and thus yielded a more comprehensive assessment of cognitive flexibility, another important contribution to the literature.

Interpretation of Findings

Attachment Style and Mentalization

Attachment Avoidance and Mentalization. To the author's knowledge, this was the first study to empirically explore and find a connection between attachment insecurity and mentalization in a sample of therapists. Therapist attachment avoidance was negatively associated with therapist mentalization, such that therapists who were more avoidantly attached showed decreased mentalization capacities. The finding that therapist attachment avoidance was negatively associated with therapist mentalization replicates previous findings in the literature on non-therapists (Dimitrijević et al., 2018; Erkoreka & Urrutia, 2023; Fossati et al., 2018; San Cristobal et al., 2017; Sharp et al., 2016) and is a significant contribution to the literature on therapists.

The present study's finding also provides empirical support for Fonagy and colleagues' mentalization theory, which posits that attachment insecurity is a risk factor for impairments in social cognition (Bateman & Fonagy, 2004; Fonagy & Bateman, 2006). Further, the present study's finding is consistent with the study by Trusty et al. (2005), which found that avoidantly attached counselors exhibited increased empathic difficulties, as measured by self-report questionnaire. Finally, the present study's finding is in line with research suggesting that avoidantly attached individuals tend to use emotional distancing strategies (Mikulincer et al., 2003; Shaver & Mikulincer, 2002). It is possible that, due to this tendency, therapists who report higher levels of attachment avoidance are more limited in their emotional awareness, which in turn puts them at a disadvantage when it comes to mentalization. This is important to be mindful of and address in the context of psychotherapy training and supervision. Considering the present

study's finding, supervisors may benefit from attending to trainees' attachment avoidance as a way to help trainees with their struggles with understanding and/or conceptualizing their patients and themselves. Specifically, while avoidant trainees may have strengths in recognizing the thoughts and cognitions underlying patient issues and psychopathology, they may require increased support to fully appreciate and understand the role that emotions play in patient difficulties. This attention to attachment avoidance will improve trainees' abilities to provide quality psychotherapy.

It is important to note that, although a relationship was found between attachment avoidance and mentalization in therapists, the effect size of this finding was small. This is comparable to the literature on non-therapists, where the associations between attachment and mentalization tend to range from small (Erkoreka & Urrutia, 2023; Fossati et al., 2018; Sharp et al., 2016) to medium (Dimitrijević et al., 2018; San Cristobal et al., 2017). On further examination of these studies, it appears that studies with larger samples (e.g., $N > 200$) or that used performance-based mentalization measures tended to have smaller effect sizes than those using self-report mentalization measures or smaller sample sizes. The current study, which used a performance-based mentalization measure was consistent with this, finding the relationship between attachment avoidance and mentalization to have a small effect size. Another possibility to consider is that different rating perspectives capture different types of mentalizing and that this may influence the magnitude of the findings. The populations sampled in the aforementioned studies were quite mixed (e.g., parents, adolescent inpatients, college students, working adults) and no pattern was discernible that may have contributed to the differences in effect size between studies. Importantly, the current study was the first to look at the relationship

between attachment avoidance and mentalization in a sample of therapists, and as such is the best validation to date of the size of the effect of that relationship in therapists.

However, it is possible that the small effect size reflects what is thought of as a "loose coupling" in the relationship between attachment and mentalization (Fonagy & Bateman, 2006; Fonagy & Luyten, 2009). The idea of a loose coupling posits that the strength of the relationship between attachment style and mentalization varies depending on contextual factors. An example of a salient contextual factor would be the degree of stressfulness of an interpersonal interaction, such as a challenging moment in therapy. Self-report measures, which typically ask about tendencies, general abilities, patterns, or traits, tend to gloss over the situational, moment-to-moment factors that can impact those abilities/patterns. Therefore, such factors are rarely accounted for in self-report measures. Conversely, contextual factors inevitably influence performance-based measures of mentalization, which are state measures that assess mentalizing as it happens in a specific, contextualized moment in time. It may be that the extent to which mentalization is associated with attachment style is contingent on the level of stress an individual is experiencing in the present context and the extent to which that stress leads to attachment system activation. The present study's finding of a small effect size in the relationship between attachment avoidance and mentalization suggests that the FMSS may have only weakly stressed participants. The loose coupling of attachment and mentalization as well as the issue of state versus trait measurement are important themes that will be expanded upon throughout the remainder of the discussion, as they are relevant to many of the present study's findings.

Attachment Anxiety and Mentalization. It was surprising that there was no association between therapist attachment anxiety and therapist mentalization. This is inconsistent with the broader attachment literature on non-therapists, which supports that attachment anxiety is negatively associated with mentalization capacity (Dimitrijević et al., 2018; Erkoreka & Urrutia, 2023; Fossati et al., 2018; San Cristobal et al., 2017; Sharp et al., 2016). This inconsistent finding may be due to self-selection bias, how attachment was analyzed, and the possibility that participants were not adequately stressed during the mentalization task. These factors are discussed below.

Self-Selection Bias. The nature of the current sample may have contributed to the inconsistent findings regarding attachment anxiety in the current study. The mean attachment anxiety score reported by the present sample was .6 standard deviations lower than the norm (Fraley et al., 2000) as well as the mean reported in another study on psychotherapists (Cologon et al., 2017). See Table 5 above. The lower average level of attachment anxiety in the present sample may have been due to self-selection bias, with more anxiously attached therapists being less likely to participate in the study.

Although therapists are generally expected to be more securely attached than patient populations (Ensink et al., 2013; Yusof & Carpenter, 2013), this is an assumption that is not grounded in empirical research. Therapists are not exempt from a potential history of difficult or even traumatic childhood/family experiences, contributing to attachment insecurity. This has been confirmed in the research (e.g., Farber et al., 2005), which suggests that therapists, too, can be insecurely attached (Holmes, 2009; Leiper & Casares, 2002; Rizq & Target, 2010; Slade, 1999). In fact, the rates of attachment insecurity have been found to range from 25%-50% in clinical psychologists (Ackerman,

2017; Black et al., 2005) and reach up to 70% in family therapists (Yusof & Carpenter, 2013). The lower average levels of attachment insecurity in the self-selected therapist participants in the present study are not consistent with these findings. The present sample was clearly different from samples in other studies on therapists in this regard.

It is possible that the recruitment method used by the present study may have contributed to this. Similar to the above-mentioned studies that found higher rates of attachment insecurity in therapists, the present study also recruited participants online via email. However, the present study was different in its recruitment messaging. Specifically, recruitment messaging was constructed with the intent to target more insecurely attached therapists, by using the following phrasing, "we are especially interested in therapists who are struggling significantly with one or more difficult patients." It is possible that this language actually had the opposite effect, deterring more insecurely attached therapists who may have otherwise participated. Due to their preoccupation with maintaining closeness with others and their fear of losing relationships, anxiously attached individuals may be more likely to perceive their difficulties with patients as threatening and therefore they may have found the topic of the study too stressful or aversive to want to participate.

As a result of the present study's lower average level of anxious attachment, the present sample had fewer highly anxious subjects than desired and expected. Since the relationships hypothesized in the current study were derived from literature on more highly anxiously attached individuals, the hypothesized relationships may not pertain for therapists with lower levels of attachment anxiety. The present study's generalizability is unfortunately lessened in regard to attachment style. The present results are generalizable

only to therapists with low to moderate attachment anxiety. Replication of these findings in a sample that is more representative of therapists (regarding anxious attachment) is necessary before further comments can be made on generalizability beyond therapists with low to moderate levels of attachment anxiety.

Differences in Analyzing Attachment Scores. The Trusty et al. (2005) study, which informed the rationale for the present study, and which found that anxiously attached counselors had better empathic strengths than securely attached counselors, used a different approach to analyzing attachment style than the one used in the present study. Using structural equation modeling, they were able to analyze the joint effect of counselors' attachment along the dimensions of avoidance and anxiety simultaneously. The counselors with the highest level of empathy and who were characterized as "wounded healers" were those in whom attachment anxiety was high and attachment avoidance was low. Unfortunately, without a large enough sample and without a large enough proportion of highly anxiously attached therapists, the present study could not analyze attachment in the same way as Trusty et al. (2005). Instead, the present study looked at attachment anxiety and attachment avoidance separately, only yielding findings about the independent impact of each attachment dimension. This difference in statistical approach may be another explanation for why the present study did not find a relationship between therapist attachment anxiety and mentalization since the present study could not tease apart the overlapping and independent portions of the two dimensions. In other words, since attachment anxiety and attachment avoidance are correlated (r = .50 in the current study), analyses of both dimensions together can control for their effect on each other, while analyzing them separately cannot take this covariance into account. This

difference in analytic strategy may account for the different findings between the present study and the study by Trusty et al. (2005).

The Role of Stress. It is also possible that a third variable, stress, influenced the strength of the relationship between therapist attachment and mentalization. In their mentalization theory, Fonagy and colleagues (Fonagy & Bateman, 2006; Fonagy & Luyten, 2009) specify that rather than viewing attachment as a chief facilitator or driver of mentalization capacity, the relationship between attachment and mentalization ought to be understood more as a "loose coupling," an idea that was alluded to earlier. They posit that the neural systems that underly attachment are separate and distinct from those that underly mentalization (Fonagy & Bateman, 2006; Fonagy & Luyten, 2009). Importantly, Fonagy and colleagues argue that when the attachment system is activated by stress, the mentalization system becomes inhibited (Fonagy & Bateman, 2006; Fonagy & Luyten, 2009). This assertion has found growing support in neuroscientific studies that have demonstrated that when the attachment system is activated by stress, activity in brain regions involved in controlled mentalization is reduced whereas activity in brain regions involved in automatic mentalization is heightened (Lieberman, 2007; Mayes, 2006; Nolte et al., 2013). In other words, it seems that stress plays a key role in the relationship between attachment and mentalizing capacity. Thus, it may not be that insecurely attached individuals inherently lack the capacity to mentalize, but more that this capacity becomes inhibited during attachment system activation.

Importantly, individuals have different thresholds for attachment system activation, and the threshold for anxiously attached individuals is thought to be especially low (Fonagy & Luyten, 2009), which implies that it should not take too much stress to

elicit impairments in their mentalizing capacities. The present study attempted to stress participants through the ECST and FMSS, tasks which assessed cognitive flexibility and mentalization in response to emotionally arousing stimuli. In case of the ECST, it was emotionally arousing words, and in the case of the FMSS, the task itself (to reflect on and write about a challenging moment in therapy with a difficult patient) was considered adequately emotionally arousing. It is possible, however, that the lack of a significant relationship between attachment anxiety and mentalization is an indicator that these tasks were not stressful or arousing enough to activate the attachment system of participants and inhibit their mentalizing capacities, particularly for lower than average anxiously attached participants. A limitation of the present study was that it did not include a pre/post measure of stress or arousal to assess whether the ECST and the FMSS adequately stressed participants.

An alternative might have been to use tasks that have been empirically shown to lead to attachment-based stress and subsequent attachment system activation. In one series of studies that found significant relationships between attachment style and information processing capacities, participants were asked to complete cognitive tasks in the context of or in response to social and informational threats (Mikulincer, 1997). Other studies have found significant associations between attachment style and cognitive capacities such as judgment (Pereg & Mikulincer, 2004) or creative problem solving (Mikulincer & Sheffi, 2000). In these studies, the attachment system was activated by having participants complete cognitive tasks after exposure to positive affect inductions, such as recalling a happy event, visualizing it, and writing about it (Mikulincer & Sheffi, 2000), or negative affect inductions, such as reading an article about a car accident

resulting in a girl's death (Pereg & Mikulincer, 2004). These tasks appear, at least at face value, to be significantly more stressful or arousing than the stimuli on the ECST or the prompt on the FMSS.

In another study, Nolte et al. (2013) activated participants' attachment system by asking them to recall a stressful interpersonal event that happened to them in the past 12 months. Although the FMSS prompt in the present study took a similar approach, the wording was significantly different. The prompt used by Nolte et al. (2013) was: "Please think of a stressful interpersonal situation with people very significant to you that left you feeling mad, sad, and upset and where you felt helpless and emotionally overwhelmed" (p. 3). In contrast, the FMSS prompt in the present study was: "Describe an unexpectedly difficult time with a patient in which you had to change your way of working. Why do you think you behaved as you did? Why do you think your patient behaved as they did?" The FMSS prompt may have benefitted from more evocative and emotional language as contained in Nolte et al.'s (2013) prompt.

The issue of stress raises an interesting question of why a relationship was found between avoidant attachment and mentalization, but not between anxious attachment and mentalization. This seems to suggest that avoidant attachment styles are more impacted by the stress of the FMSS task than anxious attachment styles. At face value, this appears counterintuitive, since avoidantly attached individuals are thought to have higher thresholds for attachment system activation than anxiously attached individuals (Fonagy & Luyten, 2009). Although this may be the case, it is important to consider that avoidantly and anxiously attached individuals are not aroused or activated by the same stressors (see Mikulincer, 1997; Mikulincer & Shaver, 2003): Stressors that may lead to

increased attachment system activation in avoidantly attached individuals, such as emotional closeness with others, may not lead to attachment system activation as quickly in anxiously attached individuals (who tend to become more activated by social isolation or abandonment). In this sense, it is consistent with the literature that the task of mentalizing, which necessarily demands a degree of feeling, vulnerability, and reflection about emotions, may be inherently more stressful for individuals with avoidant attachment, precisely because of their preferences for emotional distancing. Conversely, whether they do it well or not, mentalizing may actually be a task that anxiously attached individuals feel relatively comfortable with and even drawn to, because of their desire for closeness and connection (Mikulincer, 1997; Trusty et al., 2005). Therefore, the current study's prompt may have been more stressful for therapists high in attachment avoidance, leading to the finding of a significant negative association between attachment avoidance and mentalization.

The Use of the FMSS to Measure Mentalization

This was the first study to use the Five-Minute Speech Sample (FMSS) to assess for mentalization in therapists. The author also developed a coding manual for using the Reflective Functioning Scale (RFS) to code the FMSS in a therapist population, another unique contribution to the literature. The present study's findings lend preliminary support for the construct validity of the FMSS measure of mentalization and for the use of this measure to assess for therapist mentalization in future studies. As expected, mentalization as measured by the FMSS was found to be significantly negatively associated with attachment avoidance, negatively associated with cognitive rigidity (as

indicated by perseverative errors on the ECST), and positively associated with observer-rated cognitive flexibility.

The fact that no significant relationship was found between mentalization as measured by the FMSS and attachment anxiety indicates that more validity information is needed on this measure, which ought to be pursued in future studies. Specifically, future research ought to investigate whether there would be a relationship between mentalization and attachment anxiety in a sample of more anxiously attached therapists. Further, researchers would need to ensure that all participants are adequately stressed such that their attachment systems are activated during the study and include a pre/post measure of stress or arousal to verify this. It would also be important to attain more concurrent validity information for the FMSS. Future research ought to compare the FMSS as rated using the Reflective Functioning Scale (RFS; Fonagy et al., 1998) with other, more well-established mentalization measures in a sample of therapists and examine whether there is a positive association. It would be especially interesting to compare the FMSS as used in the present study with the Adult Attachment Interview (AAI; George et al., 1985) or with a spoken version of the FMSS.

The FMSS as used in the present study has the potential to be a valuable tool in future research on therapist mentalization. It is an efficient, cost-effective method for assessing mentalization in therapists through a 5-minute written response to an online prompt. The efficient nature of the FMSS gives the measure increased usability in larger-scale studies on therapists. As an observer-rated measure, it also bypasses the limitations that may exist with self-report measures of mentalization, such as self-presentation

biases. The author's use of the FMSS in the present study is an important step towards validating the use of the measure in therapists.

Relationships among Three Measures of Cognitive Flexibility

The present study's use of three different rating perspectives — self-report, neuropsychological task, observer-rating — to measure cognitive flexibility was an important contribution to the literature, adding to our knowledge about cognitive flexibility as a construct and what this implies about how it ought to be assessed. Exploratory analyses showed that there was no relationship between the three different rating perspectives; the self-report, neuropsychological task, and observer-rated measure of cognitive flexibility each yielded different results. This has important implications for cognitive flexibility research. Both past and future studies on cognitive flexibility should be interpreted with the distinction between the three measurement perspectives in mind, since their findings will likely be contingent on how cognitive flexibility was measured.

The present study's finding is in line with previous empirical studies that also found no relationship between self-report and neuropsychological measures of cognitive flexibility (Howlett et al., 2022; Johnco et al., 2014; Lounes et al., 2011). Previous studies have concluded that such findings suggest that different rating perspectives assess different aspects of cognitive flexibility (Johnco et al., 2014; Lounes et al., 2011) or even different constructs altogether (Howlett et al., 2022). However, they do not speculate/elaborate on what these aspects or constructs might be. In keeping with the interpretive precedent of the aforementioned studies, the findings of the present study suggest that how one perceives one's own cognitive flexibility is different from how others perceive it and that both perspectives differ from how cognitive flexibility

manifests itself on a neuropsychological task. The subsequent discussion will address the results of each rating perspective individually and comment on what facets of cognitive flexibility each perspective may be capturing.

Self-Reported Cognitive Flexibility. Contrary to what was predicted, the findings of the present study showed that when self-reported cognitive flexibility was high, the relationship between attachment anxiety and mentalization was negative, such that as attachment anxiety increased, mentalization capacity decreased. The moderating effect of self-reported cognitive flexibility on the relationship between attachment and mentalization was small. This finding may be understood by returning to the theoretical underpinnings of cognitive flexibility and mentalization, which will be discussed below.

Cognitive flexibility is the ability to adjust to new situations and the capacity to switch between perspectives or modes of thinking (Gündüz, 2013; Zmigrod et al., 2020). Mentalization is considered a multidimensional construct, consisting of four polarities: automatic/controlled, self/other-oriented, externally/internally-focused, and cognitive/affective (Bateman & Fonagy, 2012; Fonagy & Luyten, 2009). Cognitive flexibility underlies good mentalizing in two main ways: (1) good mentalizing requires the ability to shift between and across the aforementioned polarities (Bateman & Fonagy, 2012, 2016) and (2) good mentalizing requires the ability to reflect on various ways of understanding the mental states underlying behavior (Fonagy & Adshead, 2012; Swenson & Choi-Kain, 2015). Both abilities are examples of cognitive flexibility, but the CFS self-report measure mainly assesses the latter. In other words, although the CFS assesses an individual's ability to generate and reflect on various perspectives, it does not necessarily capture or distinguish whether, for example, the individual tends to do this more in an

automatic rather than a controlled way. Therefore, both a person who is automatic in their perspective shifting and a person who is more controlled — subjects who would be expected to mentalize differently — could still rate themselves as similarly high on the CFS. It could be that how someone rates themselves on the CFS is influenced by attachment style. Research shows that anxiously attached individuals have increased tendencies towards jumping to conclusions or making social judgments impulsively (Mikulincer & Shaver, 2003). It is possible that the CFS scores of therapists who endorsed higher levels of attachment anxiety reflected a tendency towards more automatic, reflexive perspective shifting. Conversely, the CFS scores of therapists who endorsed lower levels of attachment anxiety may have reflected a tendency towards more controlled, cognitively effortful perspective shifting. The former process is most characteristic of poor mentalizing and the latter is most characteristic of skilled mentalizing (Bateman & Fonagy, 2012).

Another issue to consider is that of trait versus state cognitive flexibility. A limitation of the CFS is that it captures traits of cognitive flexibility but is unable to assess for state cognitive flexibility or how cognitive flexibility traits might manifest in specific contexts. Although it is possible that someone may be highly cognitively flexible in general this does not necessarily entail that they are able to remain that way in all contexts, especially when experiencing attachment-based stress. In Fonagy and Luyten's (2009) biobehavioral switch model, it is argued that anxiously attached individuals tend to have a low threshold for attachment system activation as well as a low threshold for switching from controlled to automatic ways of thinking, due to their hyperactivating strategies. On the one hand, it is possible that, in the present study, therapists with high

self-reported cognitive flexibility who were more anxiously attached were more impacted by the stressful FMSS task and therefore more likely to switch to automatic, reflexive ways of perspective shifting during it, leading to poorer mentalization. On the other hand, therapists with high cognitive flexibility who were less anxiously attached might have been less impacted by the stressful FMSS task and thus better able to benefit from cognitive flexibility, leading to better mentalizing; their lack of stress allowed their cognitive flexibility to facilitate better mentalizing. However, because stress was not measured in the present study, this possibility cannot be definitively concluded.

Finally, an interesting finding emerged regarding self-reported cognitive flexibility, as it relates to the present diverse sample. Interestingly, on average, in the present study, White participants rated themselves higher on cognitive flexibility than Non-White participants. This impacts generalizability and should be taken into consideration in future studies measuring cognitive flexibility via self-report; the racial composition of the sample may impact findings. It is notable that no such differences were found with the other rating perspectives of cognitive flexibility. Thus, it is not that White participants were more flexible in practice but rather that they tended to see themselves that way more than Non-Whites.

This raises the issue of how self-report measures are uniquely impacted by individual self-perception and motivational factors in ways neuropsychological and observer-rated measures are not. For example, anxious attachment has been consistently associated with social desirability (Mikulincer, 1997; Mikulincer & Shaver, 2003). It is possible that more highly anxiously attached participants rated themselves as highly flexible, not because it was an accurate representation of their tendencies but more

because they desired to see themselves or be seen by others in that way. Such factors could lead to blind spots, negatively impact judgment and decision-making, and ultimately exacerbate mentalizing impairments in therapists with increased anxious attachment. It may be that such factors led to the inconsistencies in the measurement of cognitive flexibility across the three measurement perspectives.

Overall, the present study's finding about the moderating effect of self-reported cognitive flexibility on the relationship between attachment anxiety and mentalization has important implications for psychotherapy training. If the relationship between attachment anxiety and mentalization is negative when self-reported cognitive flexibility is high, this suggests that, in the interest of improving mentalization in therapists, psychotherapy training must do more than increase therapists' cognitive flexibility: in addition, it must also aim at decreasing therapists' attachment anxiety.

Cognitive Flexibility on a Neuropsychological Task. This was the first study to test therapist cognitive flexibility using the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006). To the author's knowledge, no studies have been done to test the ecological validity of the ECST. The present study's finding provides preliminary ecological validity of the ECST with a sample of therapists as indicated by the finding of a significant association between ECST task performance and mentalization on the FMSS task. This is a valuable contribution to the literature. The finding that cognitive flexibility as measured by the ECST did not moderate the relationship between therapist attachment anxiety and mentalization was unexpected. Both above-mentioned findings will be discussed below.

Relationship between ECST Performance and FMSS Performance. Cognitive rigidity (as indicated by perseverative errors on the ECST) was found to be negatively associated with mentalization as measured by the FMSS. The FMSS narratives were rated for mentalization using the Reflective Functioning Scale (RFS; Fonagy et al., 1998), which assesses various mentalizing processes. Notably, the two processes that were coded most frequently were "Envisioning/imagining/recalling changes in mental states" and "Accurate attributions of mental states to others" (Fonagy et al., 1998). The finding that complex mentalization processes such as these were associated with the basic cognitive processes of set-shifting and identifying correct rules/responses on the ECST is an exciting finding. As future studies continue to add to the ecological validity of the ECST, it has the potential to become a useful tool for gauging/assessing psychotherapists' abilities in various training settings.

The Unanswered Question of Participant Stress on the ECST. The finding that cognitive flexibility as measured by the ECST did not moderate the relationship between therapist attachment anxiety and mentalization was unexpected for the following reasons. Although the role of therapist cognitive flexibility in the relationship between attachment insecurity and mentalization has not been studied before, the theoretical (Bateman et al., 2014; Bateman & Fonagy, 2016) and empirical (Bourke & Grenyer, 2017; Ensink et al., 2013; Reading et al., 2019) literature strongly support the idea that cognitive flexibility is a key characteristic of good mentalizing. Prior studies have found that in response to attachment-based stress, controlled/reflective mentalizing becomes inhibited and automatic/reflexive mentalizing becomes activated (Nolte et al., 2013). This suggests that the ability to adapt and switch between different perspectives and modes of thinking, core

components of cognitive flexibility, would play a protective role in the relationship between attachment insecurity and mentalization. This is not what the present study found.

Returning to the role of stress may help explain the present study's null finding. The present study found an association between performance-based cognitive flexibility and mentalization but not between performance-based cognitive flexibility and attachment anxiety. Although the former finding is consistent with the literature, as described in the previous paragraph (e.g., Bateman et al., 2014; Bateman & Fonagy, 2016; Ensink et al., 2013), the latter is not. The latter finding may have been due to lower-than-expected levels of attachment anxiety in the current sample. The relationship between attachment style and various cognitive processes has been demonstrated by numerous empirical studies (Mikulincer, 1997; Mikulincer & Shaver, 2003; Mikulincer & Sheffi, 2000). Importantly, in all these studies, the association between attachment style and cognitive capacity was found within a context of (experimentally induced) stress or emotional arousal. The present study, too, attempted to create a context of stress/arousal by assessing cognitive flexibility using the ECST. It is possible that the reason why performance-based cognitive flexibility did not interact with attachment anxiety is that the ECST did not adequately stress participants' attachment systems.

Observer-Rated Cognitive Flexibility. It was surprising that observer-rated cognitive flexibility also failed to moderate the relationship between attachment anxiety and mentalization. The exploratory observer-rated measure of cognitive flexibility was developed for the purposes of assessing cognitive flexibility in as close to a clinical context as the author could, given the unfeasibility of creating an in-session, recording-

based observer-rated measure. Using this measure, FMSS narratives were rated for cognitive flexibility according to the presence and salience of two categories: the ability to adjust to new situations and the capacity to switch between perspectives or modes of thinking. The salience of either category in a narrative was judged according to the degree to which participants were observed to be reflecting on or grappling with multiple perspectives or modes of thinking. As such, this measure accounted for both the ability to shift between multiple perspectives and the quality and manner with which one does so.

To summarize the above discussion, the three measures of cognitive flexibility in the present study did not correlate and each appeared to be measuring different and distinct facets of cognitive flexibility. The CFS self-report measure (Martin & Rubin, 1995) captured trait cognitive flexibility. Specifically, it did not capture cognitive flexibility as it manifests behaviorally in the moment (such as during the FMSS task), but rather assessed participants' *beliefs* and *feelings* about their own behavior in general (as it pertains to cognitive flexibility) (Martin & Rubin, 1995). The neuropsychological task was a state measure that captured cognitive flexibility as it manifested in response to emotional stimuli. It assessed processes related to the accuracy of participants' perspective shifting, but likely only captured quicker, more automatic, heuristic cognitive strategies than controlled, slower, reasoned cognitive strategies. The observer-rated measure was also a state measure. Unlike the neuropsychological task, it likely assessed more controlled and reasoned cognitive processes. However, it did not assess for accuracy. One explanation for why neither state measure moderated the relationship between therapist attachment style and mentalization may be that neither measure comprehensively captures all key facets of cognitive flexibility that underly skilled

mentalizing: The ECST likely did not capture participants' capacities for controlled perspective shifting and the observer-rated measure did not assess for the accuracy of participants' reflective processes. Skilled mentalizing is comprised of *both* controlled *and* accurate mental state attributions. Additionally, it may be that how participants' cognitive flexibility manifested itself in isolated moments during the present study (i.e., on the FMSS and on the ECST) is a less stable predictor of how attachment style will effect mentalization than participants' views about their trait flexibility.

Generalizability of Study Findings

The present sample was more diverse than most, with almost half (40%) of the therapist sample identifying as non-White. This was a valuable strength, as most studies tend not to have such large samples of non-White participants. In fact, a recent survey by the American Psychological Association found that 20% of their membership was Non-White (APA, 2022). Therefore, the current study is well-positioned to be able to generalize beyond only White therapists to the entire population of psychotherapists.

Another strength of the present study was that it recruited therapists from a variety of psychological disciplines and from a wide range of experience levels, from trainees to seasoned professionals. Many studies of psychotherapists tend to use trainees (e.g., Martinez & Dong, 2020; Mohr et al., 2005; Trusty et al., 2005), who may differ significantly from experienced clinicians. Further, most studies tend to focus on a single psychological discipline (e.g., psychologists only or social workers only). Conversely, because the present study recruited a diverse sample of clinicians, the results of the present study are applicable to a broad range of therapists regarding field of study and experience level.

Limitations

The present study had several limitations to be discussed. The first limitation has to do with recruitment. The recruited sample was significantly less anxiously attached than would be expected based on norms and findings from previous studies (e.g., Cologon et al., 2017; Fraley et al., 2000). As mentioned earlier in the discussion, the author tried to construct his recruitment messaging to target more insecurely attached therapists, and it may be that this deterred more anxiously attached therapists from participating. The sample being significantly less anxiously attached than expected reflects an issue of self-selection bias. Regarding other demographic characteristics, the vast majority of the sample was female and heterosexual, which prevents the study's generalizability to male and LGBTQ therapist populations. In future studies, it may help to oversample even more than was done in the present study to have a large enough sample from which to select more insecurely attached, and more sex-and-gender-diverse participants.

A second limitation of the study is that the author did not include a measure of therapist stress or arousal. As discussed above, the literature suggests that a key factor that influences the strength of the relationship between insecure attachment and mentalization is attachment-based stress, which activates the attachment system and inhibits mentalization (Fonagy & Luyten, 2009). Because the author did not include a measure to assess participants' stress or arousal before and after the FMSS and ECST, it is unclear whether these tasks were stressful enough to activate their attachment systems.

A third limitation of the present study is that it was not an in-person study. Although creating a protocol that was fully online likely benefitted ease of access for

participants and was helpful in recruiting a larger number of participants, it limited the ecological validity of the study. Whether therapists' performance on computerized tasks or written responses to a prompt tell us anything meaningful about their thought processes and behavior in session with patients is a question for future research. Several studies have investigated therapist in-session behavior through coding recorded sessions (e.g., Timulak, 2008; Uhlin, 2011), but to the author's knowledge none have examined therapist cognitive flexibility or mentalization. Finally, it is possible that allowing participants to complete the protocol in the comfort of their own home or office increased the chances of interruptions, distractions, or lapses in attention and effort. Extraneous variables such as these were not controlled for and may have influenced the results of the study.

A fourth limitation of the study relates to the use of the Emotion Card Sort Test (ECST; Deveney & Deldin, 2006). Out of the final sample of $N = 158$, a significant portion ($n = 59$) did not complete the ECST, leaving a sample of $n = 99$ who had ECST data. Additionally, 7.8% ($n = 20$) of the original sample scored unusually high compared to the rest of the sample and more than 2 standard errors above previously reported means (Cerny et al., 2019) for all three valence conditions of the ECST. Their extremely high perseverative error scores on all three valence conditions suggested that their data may not have been valid; they may have simply "clicked through" the task without genuine effort. The ECST was the last measure of the protocol that participants had to complete. It is possible that participants were fatigued and/or even frustrated at this point in the study, which may have increased the likelihood of participants simply clicking through the task. To reduce this likelihood, it may have been beneficial to randomize the

order of the measures for all participants, instead of having all participants complete the measures in the same order. Further, if future studies utilize the ECST, especially online, it might be worth including a brief performance validity test before participants take the ECST, as a way of controlling for genuine effort. Alternatively, it would benefit future studies to develop criteria for determining norms for what valid performance looks like on the ECST; at present, no such norms exist.

A final limitation relates to the study's use of the FMSS. While the FMSS as adapted for the present study asked participants to write for five minutes, the original FMSS (Gottschalk & Gleser, 1969) required participants to speak for five minutes. It is possible that differences in performance on the FMSS were related to participant differences in written fluency (as opposed to spoken fluency). Some participants may have found it more difficult to write than they might have to speak for five minutes. Additionally, for some participants, having them write instead of speak may have primed them to think in a more rationalized or intellectualized manner than if they had been asked to speak. These are important considerations that future research ought to explore. As mentioned in the discussion section, comparing the FMSS and AAI or comparing the written FMSS and the spoken FMSS could shed further light on these issues.

Future Directions

The present study raised a number of interesting questions that ought to be explored in future research. The issue of self-selection bias ought to be addressed in future research on attachment insecurity in therapists. To this end, it may be useful for future studies to be especially strategic about how they might recruit insecurely attached therapists and to screen participants for their attachment style prior to allowing them to

enter the study. Additionally, it would be informative for future research to replicate the present study while adding a measure of stress or arousal for participants to take before and after the FMSS and ECST. This could provide more clarity on the questions raised in the discussion section about whether these tasks were stressful enough to activate participants' attachment system. Depending on the results of such studies, future research could investigate the relationship between therapist attachment, cognitive flexibility, and mentalization using tasks modeled more closely after those that have been demonstrated to adequately stress the attachment system (e.g., Mikulincer & Sheffi, 2000; Nolte et al., 2013; Pereg & Mikulincer, 2004).

To get the most clinically meaningful data on the relationship between therapist attachment, cognitive flexibility, and mentalization, it might be worth investigating these variables as they manifest in the context of psychotherapy, through the use of session-recordings and observer-rated measures. As an example, a study by Uhlin (2011) investigated therapists' facilitative interpersonal skills (FIS) using a rating system to score in-session recordings. Unfortunately, the measure used (the FIS-In Session rating scale) did not measure mentalization. The present study was an important first step to investigate therapist attachment, cognitive flexibility, and mentalization, but did so outside of the therapeutic context due to limitations on time and money. Given the lack of in-session measures of mentalization, an exciting next step in the research on these variables would be to follow Uhlin's (2011) lead and devote subsequent studies to the development and testing of an in-session measure of mentalization.

An in-session measure of mentalization would open up many opportunities for studying therapist mentalization in naturalistic settings as well as for the purposes of

psychotherapy training. For example, with the rise of telehealth services, further research is necessary to evaluate how online or phone service formats impact psychotherapy. A study comparing therapist in-session mentalization between in-person psychotherapy sessions and online (e.g., Zoom) psychotherapy sessions would be a valuable contribution to the literature. Regarding psychotherapy training, it would be interesting to replicate the training study by Ensink et al. (2013) and use an in-session mentalization measure as an outcome measure to determine to what extent the gains made in training translate to positive changes in psychotherapy process. Additional studies on improving therapist mentalization through training should also look at what specific capacities, when improved, lead to better mentalization in-session. Cognitive flexibility would be an example of a capacity to target in such trainings. It would be important to identify which type of cognitive flexibility is being targeted and assessed (i.e., trait cognitive flexibility, cognitive flexibility as measured by the ECST, etc.) and how that specific capacity can be improved through training (i.e., improving ECST performance would be different from improving self-perceived cognitive flexibility or observer-rated cognitive flexibility). Given the role of stress that was discussed in detail above, emotion regulation would be another capacity to target in training and evaluate whether its improvement leads to better mentalization.

The present study also raised questions about what rating perspective of cognitive flexibility would be most relevant and useful for clinical contexts. The finding that performance on the ECST was associated with mentalization capacities suggests that it adequately mimics the cognitive functions that participants encounter in real-world settings. Further research is necessary to replicate this finding and to continue to

investigate the extent to which ECST performance correlates with everyday functioning/behavior. Assessing therapists' treatment adherence flexibility (as was done in the Katz et al. (2019) study discussed in the literature review) and comparing it to their ECST performance may be a good way to validate the ECST task.

One of the important takeaways of the present study was that different rating perspectives of cognitive flexibility did not correlate with one another. As discussed, this finding is not necessarily new (see Howlett et al., 2022; Johnco et al., 2014; Lounes et al., 2011) but the extent to which different rating perspectives of cognitive flexibility correlate with one another is understudied (Howlett et al., 2022). Additionally, what the lack of correlation among these different perspectives *means* has only been minimally commented on; past research has not speculated on the specific constructs that different cognitive flexibility measures assess. Future research ought to be devoted to gaining more clarity about what specifically each rating perspective measures. This would require more validity studies on each measure. Gaining clarity on what specifically each cognitive flexibility measure assesses will help guide measure selection in future studies on therapist mentalization.

Another additional issue to address in future studies would be subjects' motivations, both in their self-representation and in their task performance. As discussed above, factors such as these may have impacted the findings of the present study. To assess participants' motivations, future research would benefit from including a measure of social desirability and/or a performance validity task. Additionally, more research is needed to develop criteria for how to assess performance validity on the ECST. As mentioned in the discussion, it could be useful to have participants complete a reliable

performance validity test, such as the Victoria Symptom Validity Test (VSVT; Slick et al., 1996), prior to giving them the ECST, to assess for adequate effort. Alternatively, it could be helpful to develop norms for ECST performance. Finally, to the author's knowledge, this was the first study to use an online version of the ECST that participants completed in the comfort of their own homes or offices. It would be interesting for future research to investigate any differences in performance between taking the ECST at home or in-person, in a laboratory setting, specifically looking at how these different contexts may impact effort.

Although the present study did not find cognitive flexibility to be a protective factor that helps anxiously attached therapists remain clinically effective, it may still be beneficial to continue to investigate this possibility in future research after addressing the above-mentioned limitations. Additionally, it would be important for future research to continue to investigate general protective factors that may help insecurely attached therapists operate effectively, especially given previous findings on the prevalence of trauma histories and attachment insecurity in therapists (e.g., Ackerman, 2017; Black et al., 2005; Farber et al., 2005; Victor et al., 2022; Yusof & Carpenter, 2013). The concept of therapists as "wounded healers" remains an important and understudied idea with the potential to improve psychotherapy training and psychotherapy outcome.

Conclusion

The present study was the first to investigate the effects of attachment insecurity and cognitive flexibility on mentalization in a diverse sample of psychotherapists. It was the first to empirically validate the relationship between attachment avoidance and mentalization in therapists. Additionally, the FMSS and the ECST had never been used in

a sample of therapists. The present study's findings contributed to the literature by providing preliminary support for the construct validity of the FMSS and ecological validity of the ECST. Finally, the present study's use of three different rating perspectives to measure cognitive flexibility in therapists was another important contribution to the literature. The finding that none of the rating perspectives were associated with one another lays the groundwork for future studies to investigate how best to assess cognitive flexibility in therapists in a clinically meaningful way and what the different rating perspectives are measuring.

The present study also yielded some unexpected findings, such as the finding that there was no association between therapist attachment anxiety and mentalization, and the finding that cognitive flexibility did not play a protective role in the relationship between therapist attachment anxiety and mentalization. Additionally, it was surprising to find that high self-reported cognitive flexibility did not lead to better mentalization in therapists with higher attachment anxiety. These findings are not what the theoretical and empirical literature would suggest (e.g., Bateman et al., 2014; Ensink et al., 2013). However, these findings added more complexity to what the literature currently suggests about the role of cognitive flexibility in the mentalizing capacities of therapists with anxious attachment: It may be that, in order for cognitive flexibility to benefit one's mentalization, one must have low levels of attachment anxiety. Further, flexibility alone may not be enough to protect against mentalizing impairments. For example, it is possible that the accuracy, plausibility, and detail/elaborateness of one's mental state attributions play an important role in determining whether one's cognitive flexibility has a positive or negative impact on mentalization. The study's findings also helped bring to the forefront the key role of

stress and arousal in attachment style and its relationship to cognitive functioning. Future research investigating therapist attachment ought to include stress and arousal as a variable and ought to use tasks already demonstrated to activate the attachment system.

The research suggests that therapists are no less susceptible to adverse childhood experiences and attachment difficulties than others (e.g., Ackerman, 2017; Black et al., 2005; Farber et al., 2005; Victor et al., 2022; Yusof & Carpenter, 2013). As such, they may be similarly vulnerable to the mentalizing challenges that can impact insecurely attached individuals. However, ample studies have demonstrated the effectiveness of psychotherapy (Wampold & Imel, 2015) as well as the fact that the therapists themselves are an important contributor to the effectiveness of a given treatment modality (e.g., Anderson et al., 2015; Kim et al., 2006). The question of whether a therapists' level of woundedness helps or hurts their effectiveness has yet to be answered. The wounded healer concept supports the idea that an important characteristic of an effective therapist may not necessarily be the absence of woundedness, but rather the capacity to transform woundedness into healing. Given the ubiquity of human suffering, future research, as well as psychotherapy training, ought to dedicate resources to helping therapists gain the insight and skills necessary to transform whatever wounds they may have into healing.

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Appendix A

Pilot Study

A pilot study was run to test a working version of the procedure and gather descriptives data for a number of measures under consideration. The pilot study is described here.

Pilot Study Participants

The author recruited a convenience sample of 28 therapists using snowball sampling. Five (18%) out of the 28 participants did not complete any of the Qualtrics measures and were excluded listwise from the analyses. The final sample size of the pilot study was $N = 23$. Participants were 16 (69.5%) females and 7 (30.4%) males, with ages ranging from 24 to 58 and a mean age of 32. Sixteen (69.5%) identified as White, 3 (13%) as Asian, 3 (13%) as "Other" (1 specified: "Black/Hispanic," 1 specified: "Orthodox Jew," and 1 specified: "Other"), and 1 (4.3%) selected "prefer not to say." The majority ($n = 21$, 91.3%) of participants identified as heterosexual, 1 (4.3%) participant identified as bisexual, and 1 (4.3%) identified as homosexual. The majority ($n = 21$, 91.3%) of participants were in the field of clinical psychology, 1 (4.3%) was in the field of social work, and 1 (4.3%) was in the field of marriage and family therapy.

Pilot Study Measures

The following measures were administered in the following order: Experiences in Close Relationships Scale - Revised (ECR-R; Fraley et al., 2000), Cognitive Flexibility Inventory (CFI; Dennis & Vander Wal, 2010), Reflective Functioning Questionnaire (RFQ; Fonagy et al., 2016), Certainty About Mental States Questionnaire (CAMSQ; Müller et al., 2021), Beck Depression Inventory - Second Edition (BDI-II; Beck et al.,

1996), Five-Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969), Emotion Card Sort Test (ECST; Deveney & Deldin, 2006). The ECR-R, BDI-II, FMSS, and ECST were included in the final protocol and are described in more detail in the measures section above. Based on the pilot study results, it was decided to exclude the RFQ, CFI, and CAMSQ from the final protocol. These measures are described briefly in Appendix B.

Pilot Study Results

Using data from Qualtrics and Testable, the authors estimated that the average participant completion time for the pilot was around 30 minutes. This is half the time it took for previous therapist studies using an interview-based approach to administer a single measure (e.g. the AAI: Cologon et al., 2017; the TRI: Reading et al., 2019; the TRI: Safran et al., 2014). Out of the final sample of $N = 23$, the majority ($n = 18$, 78%) completed all measures in the pilot. Out of the 5 participants whose data was incomplete, 1 (4.3%) participant only completed the demographics form and the ECR-R. The other 4 (17%) participants completed the vast majority of the measures: 1 (4.3%) participant completed all measures except the FMSS and the ECST, 3 (13%) completed all measures except the ECST. The author reached out to the latter 3 participants about this. Two out of these 3 reported that they could not complete the ECST due to technological difficulties. The author, in consultation with the Testable.org team, was able to fix these errors within 24 hours. The third participant reported having forgone completing the ECST for reasons unrelated to the task. All participants were encouraged, but not required, to give feedback about their experience of the procedure. The author also ran descriptive analysis for all of the measures administered.

Participant Feedback

The author received feedback from 14 (60.8%) participants. Three (13%) participants commented about the length of the ECST, reporting that it felt long. One of these participants also reported feeling as if some of the self-report measures were too long. Another participant proposed the possibility of incorporating a "progress bar" in the ECST to mitigate frustration. Out of the final sample of $N = 23$ participants who completed the pilot study, only 1 (4.3%) reported confusion about a core measure (the feedback was that the FMSS instructions needed to be clearer) and 2 (8.6%) reported confusion about the demographic questions regarding the total number of patients worked with and total clinical hours. Three (13%) participants explicitly reported that they did not experience any problems and 1 (4.3%) reported that the protocol felt "very easy and straightforward." Eight (34.8%) participants expressed either enjoyment, intrigue, or interest in regard to the overall protocol and particularly in regard to the ECST. All feedback was taken into consideration and incorporated into the final protocol.

Descriptive Statistics

Means, standard deviations, and ranges for the measures are summarized in Table A1. In addition to testing the working procedure, a second goal of the pilot study was to examine whether the measures under consideration would be sensitive enough to detect the variance that is expected to exist in therapists in the variables under investigation, i.e. in the interest of minimizing the possibility of Type II errors. Part of this involved considering whether the measures would yield a wide enough range. This was especially important for the CFI, RFQ, CAMSQ, and ECST, since they had not been used in therapist populations before. When deciding between which mentalization measures to

Table A1

Descriptive Statistics of the Pilot Study Data

Measure	*N*	Range	Minimum	Maximum	Mean	*SD*
ECST Neg	18	41	0	41	8.50	11.20
ECST Pos	18	50	0	50	7.22	12.02
ECST Neu	18	46	1	47	9.39	11.95
ECR-R Avoidance	23	5	1.28	6.28	2.49	1.04
ECR-R Anxiety	23	4.83	1.11	5.94	2.61	1.25
RFQ_C	22	1.83	1.17	3	1.84	0.53
RFQ_U	22	0.67	0	0.67	0.14	0.20
CFI Alternatives	22	21	64	85	76.32	5.02
CFI Control	22	17	31	48	39.09	5.94
CFI Total	22	31	100	131	115.41	8.65
BDI-II Total	22	42	21	63	29.59	9.84
CAMSQ Other-Certainty	22	1.50	4.40	5.90	5.16	0.37
CAMSQ Self-Certainty	22	2.30	4.60	6.90	5.68	0.57
CAMSQ O-S Discrepancy	22	2.60	- 2	0.60	-0.51	0.54
RFS	21	3.50	2	5.50	3.19	0.91

Note. ECST Neg/Pos/Neu = Cognitive Flexibility as measured by perseverative errors in response to negative/positive/neutral stimuli on the Emotion Card Sort Task (Deveney & Deldin, 2006); ECR-R Avoidance/Anxiety = Avoidant and Anxious Attachment as measured by the Experiences in Close Relationships Scale – Revised (Fraley et al., 2000); CFI Alternatives/Control/Total = Cognitive Flexibility as measured by the Alternatives/Control/Total subscales of the Cognitive Flexibility Inventory (Dennis and Vander Wal, 2010); Depression as measured by the BDI-II = Beck Depression Inventory – Second Edition (Beck et al., 1996); CAMSQ Other-Certainty/Self-Certainty/O-S Discrepancy = Mentalization as measured by the Other-Certainty/Self-Certainty/O-S Discrepancy subscales of the Certainty About Mental States Questionnaire (Müller et al., 2021); RFS = Mentalization as measured by the Reflective Functioning Scale (Fonagy et al., 1998).

use for the final protocol, the measure yielding the widest range was preferred. Based on our findings, the authors decided to exclude the RFQ, CAMSQ, and CFI from the final protocol and include the ECR-R, FMSS, and ECST. A more detailed discussion about the decision process can be found in Appendix C.

Appendix B

Measures Tested in the Pilot Study

Reflective Functioning Questionnaire

The Reflective Functioning Questionnaire (RFQ; Fonagy et al., 2016) is an 8-item self-report measure that rates items on a scale of 1 (totally disagree) to 7 (totally agree). Items are rescored on a scale of 0-3, which results in two different subscales: Certainty about Mental States (RFQ_C) and Uncertainty about Mental States (RFQ_U). The former assesses hypermentalizing and the latter assesses hypomentalizing. On the RFQ_C, lower scores represent greater hypermentalizing and higher scores represent more genuine mentalizing. On the RFQ_U, higher scores represent greater hypomentalizing and lower scores represent more genuine mentalizing. The internal consistency of the RFQ_C was .65 in a clinical sample and .67 in a non-clinical sample (Fonagy et al., 2016). The RFQ_U had an internal consistency of .77 in a clinical sample and .63 in a non-clinical sample (Fonagy et al., 2016). In the present pilot study sample, the RFQ_C had an internal consistency of .63 and the RFQ_U had an internal consistency of .37. The RFQ was not included in the final study protocol due to these low alpha coefficients, in addition to the restricted range yielded by both subscales in the present pilot sample.

Cognitive Flexibility Inventory

The Cognitive Flexibility Inventory (CFI; Dennis and Vander Wal, 2010) is a 20-item self-report measure and is organized into an Alternatives subscale and a Control subscale. Items are rated on a 7-point scale from *strongly disagree* (1) to *strongly agree* (7). Cognitive Flexibility is indicated by a total score, with higher scores signifying greater cognitive flexibility and lower scores signifying less cognitive flexibility. In a student sample, the Alternatives and Control subscales had internal consistencies of .90-.91 and .91, respectively, and the total scale had an internal consistency of .84-.86 (Dennis and Vander Wal, 2010). The CFI also showed good convergent validity with other self-report measures of cognitive flexibility. In the present pilot study sample, the Alternatives and Control subscales had internal consistencies of .67 and .80, and the total scale had an internal consistency of .76. The authors considered using the total scale for the final protocol, but decided to use the Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995) instead, since it demonstrated higher internal consistency in a larger sample of clinicians (Martinez & Dong, 2020).

Certainty About Mental States Questionnaire

The Certainty About Mental States Questionnaire (CAMSQ; Müller et al., 2021) is a 20-item self-report measure of mentalization in the general population. Items are rated on a scale of 1 (*never*) to 7 (*always*). It is made up of an Other-Certainty scale (with items concerning the ability to interpret other's mental states), a Self-Certainty scale (with items concerning the ability to interpret one's own mental states), and an Other-Self-Discrepancy scale. Mentalization capacity is conceptualized in terms of different configurations of Self-Certainty and Other-Certainty. Low scores on the Self-Certainty

scale are indicative of hypomentalizing, low scores on the Self-Certainty scale combined with similar or exceeding scores on the Other-Certainty scale are indicative of hypermentalizing, and high self-certainty scores that exceed Other-Certainty scores would be indicative of genuine or healthy mentalizing. In a combined sample of $N = 804$ drawn from the general population in the U.S. and Germany, the Self-Certainty scale had an internal consistency of .90/.88 (U.S./GER) and the Other-Certainty scale had an internal consistency of .91/.89 (U.S./GER) (Müller et al., 2021). In the present pilot study sample, the Self-Certainty scale had an internal consistency of .86 and the Other-Certainty scale had an internal consistency of .51. Due to the poor internal consistency of the latter scale and the limited range the CAMSQ was found to yield in the pilot study, the CAMSQ was excluded from the final protocol.

Appendix C

Pilot Study Results

On the RFQ (Fonagy et al., 2016), the RFQ_C yielded a range of 1.83, with a minimum statistic of 1.17 and a maximum statistic of 3. The RFQ_U yielded a range of 0.67, with a minimum value of 0 and a maximum value of .67. The RFQ_C yielded a mean of 1.84 and the RFQ_U yielded a mean of .14. On the CAMSQ (Müller et al., 2021), the Other-Certainty scale had a range of 1.5, with a minimum value of 4.4 and a maximum value of 5.9. The Self-Certainty scale of the CAMSQ had a range of 2.3, with a minimum value of 4.6 and a maximum value of 6.9. The Other-Self discrepancy scale had a range of 2.6, with a minimum value of -2.0 and a maximum value of .60.

The authors of the CAMSQ, Müller and colleagues (2021), did not report the range the CAMSQ yielded in the nonclinical U.S. and German sample. However, they did report the mean, which amounted to 5.34 (*SD* = .92)/5.36 (*SD* = .81) (U.S./GER) on the Self-Certainty scale, 4.73 (*SD* = .96)/4.65 (*SD* = .79) (U.S./GER) on the Other-Certainty scale, and -0.61 (*SD* = .91)/-0.70 *(SD* = .77) (U.S./GER) on the Other-Self Discrepancy scale. Our pilot sample had comparable but slightly higher mean scores on the Self-Certainty scale (*M* = 5.68, *SD* = .57) and the Other-Certainty scale (*M* = 5.16, *SD* = .37). These higher mean scores are consistent with what would be expected of therapists compared to the general population (e.g., Ensink et al., 2013).

Between the three mentalization measures (RFQ, CAMSQ, and RFS), the range of the RFQ scales was the most restricted, leading the author to decide it was not appropriate for the present study. Additional support for this decision was that both RFQ scales were found to have poor internal consistency (α = .37 for RFQ_U and α = .63 for

RFQ_C) with the pilot sample. The CAMSQ subscales yielded slightly higher ranges compared to the RFQ subscales. However, although the Self-Certainty subscale was found to have a good internal consistency ($\alpha = .86$), the internal consistency of the Other-Certainty scale was poor ($\alpha = .51$). This made the CAMSQ inappropriate for use in the present study, since assessing Self-Certainty alone would not be enough to capture the construct of mentalization as defined by Fonagy and colleagues (1998) and as conceptualized in the present study. Due to the limited sample size of the pilot, it was difficult to make conclusive determinations about what the range or internal consistency might look like for these measures if used on a larger sample in the final study. However, these preliminary results were enough to deter the author from deciding to include them in the final protocol. Limiting the number of measures included in the final protocol also helped the study remain in line with Widdowson's (2012) "ease of participation" recommendation, mentioned earlier, and keep time burden to a minimum.

Compared to the RFQ and the CAMSQ, the RFS yielded the widest range with a minimum value of 2 and a maximum value of 5.5. This range of 3.5 is identical to the range found in the Cologon et al. (2017) study, discussed in more detail in Chapter 2. The mean reflective functioning score in the pilot sample was 3.19 ($SD = .91$). This reflects a much less favorable assessment of reflective functioning compared to what was self-reported in the RFQ and CAMSQ, suggesting that the RFS might be more sensitive to reflective functioning difficulties in therapists than the RFQ or CAMSQ. Notably, the mean reflective functioning score in the pilot sample was also far lower than mean reflective functioning scores reported by Cologon et al. (2017) ($M = 6.12$, $SD = 1.09$) and Reading et al. (2019) ($M = 5.60$, $SD = 1.18$) (the only other two studies that investigated

therapist reflective functioning using the RFS). Rather than being indicative of unusual limitations in the reflective functioning of the pilot sample, it is possible that this was more a reflection of the arguably more challenging nature of the FMSS, given the prompt and the 5-minute time limit, compared to the AAI and the TRI, where there is no time limit. This would indicate that therapist reflective functioning as measured using the FMSS should not be considered a global measure of therapist reflective functioning, but rather a measure of "state reflective functioning" (Reading et al., 2019). This is consistent with the goal of the present study, which sought to account for the emotional context in measuring therapist cognitive flexibility and therapist reflective functioning.

The ECST yielded wide ranges in all three valence conditions. The range in the negative condition was 41, with a minimum of 0 and a maximum of 41. The range in the positive condition was 50, with a minimum of 0 and a maximum of 50. The range in the neutral condition was 46, with a minimum of 1 and a maximum of 47. It is possible that this is more a reflection of outliers. The authors identified outliers using stem-and-leaf plots and interquartile range rules of 1.5 and 3 in SPSS. Two outliers were detected in the negative valence condition and three were detected in the positive and neutral valence conditions. After removing the outliers, the range in the negative condition was 21, with a minimum of 0 and maximum of 21. The range in the positive condition was 6, with a minimum of 0 and maximum of 6. The range in the neutral condition was 10, with a minimum of 1 and maximum of 11. The authors also calculated the mean scores (i.e. mean perseverative errors) of each condition after adjusting for outliers. Results indicated that the mean number of perseverative errors was 5.19 (*SD* = 5.66), 2.87 (*SD* = 1.77), and 4.87 (*SD* = 3.14) in the negative, positive, and neutral conditions, respectively. These

mean scores lie within the range of the mean scores reported in the other two existing empirical studies using the ECST, comparing the performance of healthy controls with that of individuals diagnosed with MDD (Deveney & Deldin, 2006) and with that of individuals diagnosed with MDD in remission (Cerny et al., 2019). For example, in the Deveney and Deldin (2006) study, healthy controls made approximately 2 perseverative errors in the neutral and negative conditions and approximately 5 perseverative errors in the positive valence conditions. MDD participants made approximately 3 perseverative errors in the positive and neutral valence conditions and approximately 5 perseverative errors in the negative valence condition. The range was not reported in either study.

On the Alternatives subscale of the CFI, the range was 21, with a minimum of 64 and a maximum of 85. On the Control subscale, the range was 17, with a minimum of 31 and a maximum of 48. On the total scale, the range was 31, with a minimum of 100 and a maximum of 131. Participants in the pilot had higher mean total scores on all scales of the CFI compared to the mean total scores of the student sample on which the measure was developed. Participants in the pilot study had mean total scores of 76 (*SD* = 5.02), 39 (*SD* = 5.94), and 115 (*SD* = 8.65) on the Alternatives, Control, and Total scales, respectively. Participants in the measure development study (Dennis & Vander Wal, 2010) had mean total scores of 69 (*SD* = 9.40), 36 (*SD* = 6.77), and 105 (*SD* = 13.84) on the Alternatives, Control, and Total scales, respectively. In the present pilot study sample, the Alternatives and Control subscales had internal consistencies of .67 and .80, and the Total scale had an internal consistency of .76. The authors considered using the total scale for the final protocol, but decided to use the CFS instead, since it demonstrated

higher internal consistency (α = .80) in a larger sample of clinicians (Martinez & Dong, 2020).

Both subscales of the ECR-R yielded acceptable ranges. The range on the Avoidance Subscale was 5, with a minimum of 1.28 and a maximum of 6.28. The range on the Anxiety Subscale was 4.83, with a minimum of 1.11 and a maximum of 5.94. The mean on the Avoidance Subscale was 2.49 (*SD* = 1.04) and the mean on the Anxiety Subscale was 2.61 (*SD* = 1.25). These means are slightly lower, but still comparable to those reported in other studies on therapists that used the ECR (e.g. Cologon et al., 2017; Lu et al., 2021; Wiseman & Tishby, 2014). The discrepancy suggests lower levels of insecure attachment in present pilot sample compared to what has been reported in other therapist samples.

The pilot sample was too small to make conclusive interpretations of these results, but based on findings, the author decided to exclude the RFQ, CAMSQ, and CFI from the final protocol and include the ECR-R, FMSS, and ECST.

Appendix D

Adaptation of the FMSS and ECST for the Present Study

Five-Minute Speech Sample

Consistent with the precedent set by many other authors (see Sher-Censor, 2015) and most recently by Adkins and Fonagy (2016), this author adapted the FMSS for the unique purposes of the present study, which required a brief alternative to the much longer Adult Attachment Interview (AAI; George et al., 1985) and Therapist Relationship Interview (TRI; Safran & Muran, 2007) measures that have been used to assess for reflective functioning in past studies. This author modeled the FMSS protocol after the one developed by Adkins and Fonagy (2016), which involved giving participants an instruction sheet asking them to speak into a recorder for five minutes about "whatever comes to mind" in response to a three-part prompt. Participants were left alone in a room with the instruction sheet, recorder, and a five-minute timer. In order to adapt the FMSS to the present study's participant self-administered online protocol, the present author developed an online version of the FMSS, which utilized a written prompt and required participants to type their responses into a response box, instead of record them into a recorder.

Adkins and Fonagy (2016) modeled their prompt after questions from the Parental Development Interview (PDI; Slade et al., 2004). Following this approach, the present author modeled the prompts after a number of sources, and came up with the following: "Describe an unexpectedly difficult time with a patient in which you had to change your way of working. Why do you think you behaved as you did? Why do you think your patient behaved as they did?"

The first part of the prompt ("Describe an unexpectedly difficult time with a patient in which you had to change your way of working") represents the basic concept of having participants talk about challenging relational moments, which has been implemented in other interviews (e.g., Relationship Anecdotes Paradigm, RAP; Luborsky, 1978), including ones that have been coded for reflective functioning using the RFS (e.g., AAI, George et al., 1985; FMSS, Gottschalk & Gleser, 1969; TRI, Safran & Muran, 2007). For example, Adkins and Fonagy's (2016) FMSS prompts: "Tell me about a problem you had with your child recently and how you dealt with it" (p. 10). Additionally, Safran and Muran's (2007) TRI asks: "Is there anything that puzzles you or that you find challenging in your work with your patient?" (p. 1) and "Did you experience any moments of conflict, disagreement, misunderstanding, or tension in your relationship with your patient; or a particular time when you felt rejected, attacked, or criticized by your patient (Safran & Muran, 2007)?" (p. 1). The second and third parts of the prompt ("Why do you think you behaved as you did? Why do you think your patient behaved as they did?") were specifically recommended by one of the authors of the RFS (H. Steele, personal communication, May 5, 2021) and modeled after a central "demand question" (i.e., a question demanding demonstration of RF) in the AAI: Why did your parents behave as they did during your childhood?

The author used the "timing question" feature in Qualtrics for the FMSS. This restricted participants from moving on to the next question until the time was up. Further, when the 5 minutes were up, the participants were *automatically* moved on to the next question and unable to return to the FMSS to edit their responses. This feature also allowed participants to see the timer and manage their responses accordingly. The FMSS

was divided into two separate "pages" on the Qualtrics survey for the present study. The first page contained the FMSS instructions and the second page contained the prompt, text entry box, and timer. After making adjustments to the prompt based on feedback from pilot study participants, the final FMSS protocol was presented as follows, in the following format.

Page 1:

"On the next page you will be given 5 minutes to write a response to the following prompt:

Describe an unexpectedly difficult time with a patient in which you had to change your way of working. Why do you think you behaved as you did? Why do you think your patient behaved as they did?

Because you will only be given five minutes to respond, please DO NOT proceed onto the next page until you have decided on a patient and a moment to write about. On the next page, simply write about whatever comes to mind in regard to the prompt. **PLEASE CONTINUE WRITING FOR THE ENTIRE 5 MINUTES.** You will be able to refer to a timer at the bottom of the page to see how much time you have left. Please do not click the "next" arrow. When the five minutes are up, what you have written will be saved and you will automatically be moved onto the next screen. You will not have the opportunity to go back and edit your response."

Page 2:

Describe an unexpectedly difficult time with a patient in which you had to change your way of working. Why do you think you behaved as you did? Why do you think your patient behaved as they did?

Emotion Card Sort Test

Consistent with Deveney and Deldin's (2006) scoring approach, the author adopted a strict definition of perseverative errors. According to this definition, a perseverative error is when "a participant continues to respond to an old rule after receiving unambiguous feedback that the prior rule was no longer valid" (C. Deveney, personal communication, June 9, 2021). The following principles were adhered to when scoring, being especially mindful of this criterion of unambiguity: (1) the first error after a rule change was not counted as a perseverative error, but was considered a "rule change" error, (2) the participant must have received unambiguous feedback about the rule change (some cards have overlapping response choices for different rules. e.g., The same card might have the same response choice for the color rule as it does for the number rule, and so it's possible for participants to still get positive feedback even if they continue to sort according to an old rule. However, if they received error feedback, they could no longer be given the "excuse" of ambiguity. Thus, all sorts to the old rule that occurred *after* the error feedback were coded as perseverative errors.), (3) the participant must have unambiguously sorted to an old rule (i.e., as opposed to "testing out" rules other than the old rule). If it was unambiguous that they were still sorting to the old rule (i.e., if his response cannot possibly apply to any other card/rule) the error was scored as a perseverative error.

With the permission of the authors of the ECST, the present study used a novel, identical online version of the ECST using Testable.org. Because it was developed using Testable.org, participants were required to complete the task on Testable.org as well. However, the present study used Qualtrics for the development of the rest of the study

protocol. To minimize participant confusion by emailing them two different links, the present study had participants be automatically redirected to the Testable.org link from within the Qualtrics survey, once they clicked the "next" button. Because the ECST was the last measure in the protocol, this redirection occurred at the end of the survey, after all other data was gathered. This minimized potential problems if participants were redirected mid-survey and then required to return to Qualtrics after completing the ECST. In order to keep track of participant data and be able to match a participant's Qualtrics data with their ECST data (collected and stored on Testable.org), Qualtrics assigned each participant a randomized ID, created using their "embedded data and piped text" feature. The ID was displayed at the end of the survey, in the same question box as the ECST link and instructions. When participants clicked the ECST link, they needed to enter their ID prior to starting the task. This way, the data collected via Qualtrics and Testable were identifiable by participant ID. The final question box instructions in Qualtrics were tweaked in accordance with feedback from pilot participants and are presented as follows, in the following format:

"When you click the next arrow below, your responses will be recorded and you will be redirected to Testable.org in order to complete the final task of the study. This should take around 15 minutes. **Please continue with the task until the very end.** You will know when the task is complete when you reach a screen that says, "Great job! You have successfully completed the study! Thank you for your participation."

Before you begin the task, you will be asked to enter a "Participant ID."

Your unique Participant ID is as follows: ${e://Field/Random%20ID}

Please write this number down and/or copy and paste it into a word document, so that you can enter it in the required field before you begin the task."

Appendix E

Manual: Coding the FMSS for Cognitive Flexibility

- Narratives are coded for cognitive flexibility according to the following two categories:
  (a) The ability to adjust to new situations.
  (b) The capacity to switch between perspectives or modes of thinking.
- Each narrative receives one, single code, based on the presence/absence of the above categories.
- Cognitive flexibility is rated according to the following three-point scale:

0 = Not present

1 = Present (meets basic/minimum criteria)

2 = Very Present (elaborated, most salient, reflecting/grappling with multiple perspectives)

Coding steps:

1. Read through the narrative with the following question in mind: is cognitive flexibility **present or not?**
   - If you observe at least one example of either (a) The ability to adjust to new situations or (b) The capacity to switch between perspectives or modes of thinking, the narrative should receive a code of "1."
   - (Both categories should be considered equally indicative of cognitive flexibility. Thus, to receive a code of "1," it is only necessary for one of the two categories to be present/represented in a narrative).

- If examples of (a) AND (b) are BOTH absent from the narrative, the narrative should receive a code of "0."
- Considerations for assigning a code of "1."
    - Does the participant provide a clear example of a time where they changed their way of working with or thinking about a patient? If not, does the participant at least reflect on how they *might* have changed their way of working with or thinking about a patient (i.e. in hindsight)?
    - Does the participant demonstrate a clear change or shift in perspective? i.e. Does the participant clearly move from/between one way of behaving or thinking to a clearly different way of behaving or thinking? *Note: Mere perspective-taking (e.g. imagining what a patient might be thinking/feeling or why they behaved a certain way) is not the same as* ***shifting*** *from one perspective to another. A narrative that contains perspective-taking, but no examples/evidence of a perspective* ***shift*** *would receive a code of "0."*
        - Mere perspective-taking, examples:
            - "He seemed confused."
            - "He experienced me as his father."
            - "She is overly critical of herself and wants to make sure she is not hurting others' feelings, to her own detriment."

- "I think he said this, because he was feeling anxious about the possibility of psychotherapy helping him and a sense of urgency about unwanted behaviors improving and mood states regulating."

- Perspective shift, examples:
  - "At first, I thought her anxiety was mostly due to low self-esteem due to being picked on by others…However, the more I worked with my patient, the more I discovered that her anxiety was stemming from perfectionistic tendencies, and less so from low self-esteem."
  - "I tend to be a solution-focused person and provider, and I began to realize that the client did not want solutions, and that the solutions I provided were not helpful to them…I change my approach to focus on listening and rapport building."
  - "On my part, I had little confidence in myself as a clinician and was concerned that I would be imposing on her. On her part, I think she was afraid that I would be abandoning or unaccepting of her trauma given her history and our cultural differences."

- Considerations for assigning a code of "2."
    - Frequency: is there more than one example of (a) or (b) in the narrative?
    - Markedness: Is the example of (a) and/or (b) particularly detailed, elaborate, complex, or sophisticated? Is there clear evidence of the participant **reflecting** on or **grappling** with multiple perspectives or modes of thinking?

2. The coding should involve two coders. At the beginning of the coding timeline, coders should double code five narratives from the sample. They then should meet once to (1) discuss their ratings of these five narratives (2) resolve any discrepancies by deciding the best application of the manual in these instances (3) reach 100% reliability for these five narratives (by coding any with discrepancies together) and (4) reach a consensus about how they would apply the coding manual most accurately and how they would approach the coding of the subsequent narratives based on their discussion and consensus regarding these first five narratives. After this initial meeting, both coders should code the remaining narratives. When the coding is complete, they should review each others' codes, discuss which ones they disagree on, and reach a consensus for a final code.

Examples

Narratives receiving a code of "1:"

"I had a client with social anxiety who struggled to speak up in session and share feelings. I had to incorporate different forms of communication such as art therapy mindfulness and movement rather than typical talk therapy."

"I worked with a student who reported significant sleep problems. He said he wakes up too early or stays in bed on his phone for 2 hours before getting out. I wanted to help him change this behavior. However, any suggestion I made was denied by him. I offered standard sleep hygiene advice, but the patient explained why none of them would work…I decided to change my style of therapy to be more supportive. In the next session, I disclosed more about myself in a matter relevant to the patient's presenting concern, which helped strengthen the alliance."

"I was working with a student on the spectrum, he was having difficulty in the classroom with his teachers as well as with his peers. I typically meet with my students individually either in my office or in another private 1:1 setting. However, when working with him, I came to realize that my way of working with him was not helping him gain insight into what was happening in the class. And, we were not able to create behavior change. As a result, I pushed into his class every other week, pulled up a chair alongside him and prompted him in the moment on what socially appropriate skills he needed to use in the moment."

Narratives receiving a code of "2:"

"I have worked with a patient for a few years who presents with verbal aggression, including homicidal threats. I used to approach this session feeling confused and attempting to understand the underlying meaning of why he was presenting this way, so harsh toward me when all other patients were usually very kind to me and enjoyed working with me. It took some time to understand that this patient had a lot of self-doubt and struggled with confidence. He is overweight and would often make comments or threats towards others as he wanted them to feel what he felt about himself. After some time of fighting these behaviors and attempting to correct him, I joined him in his pain and we were able to build a relationship after I wasn't taking what he was saying to heart or personally."

"I had a patient who would not open up to me, make many comments or answer any questions. She was very reticent to share anything about herself. Initially, I felt very frustrated and like I wasn't going to be able to help this patient. In talking with my supervisor, who suggested I find any angle with which to get the patient talking, I was able to ask her about her struggles with immigration. I also had to change my way of working with her, because she became very psychotic, and I had to shift my focus to helping her manage her symptoms and avoid aggressive behavior while waiting to be hospitalized; however, she became more open with me. I think that my initial feelings of frustration were in response to the patient's demeanor and my feeling like I could not help them, and perhaps feeling angry at them and myself. I think the patient initially did

not trust me and was ashamed of her symptoms, which led to her not wanting to open up until we had built rapport."

"When working with one of my patients, it became evident that she was extremely religious early on in our treatment. Many of her own successes she would inadvertently attribute to God, making it difficult for her to acknowledge her agency and strength at times. Particularly given her extensive complex trauma history, and her tendency to feel guilt for many of the nefarious events that happened to her, I have struggled to toe the line between challenging her and falling in line with her beliefs. I often hope for her to see her own actions as extraordinarily resilient and agentic, however I have often realized this is born out of my own hopes for her."