2023

No pain, no gain? Attachment anxiety, sensory processing sensitivity, and empathy in a therapist sample

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NO PAIN, NO GAIN?

ATTACHMENT ANXIETY, SENSORY PROCESSING SENSITIVITY, AND EMPATHY IN A THERAPIST SAMPLE

BY

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A DOCTORAL DISSERTATION SUBMITTED TO THE GRADUATE FACULTY OF THE RICHARD L. CONOLLY COLLEGE OF LONG ISLAND UNIVERSITY, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

SEPTEMBER 2021

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Abstract

This study used the wounded healer phenomenon, which suggests that people who have undergone experiences of suffering may have acquired empathic strengths allowing them to be more effective healers (e.g., Wolgien & Coady, 1997), as a springboard from which to explore issues related to distress and empathy in a therapist sample. It proposed anxious attachment and sensory processing sensitivity (SPS), constructs which have been associated with both distress and empathic ability, as operationalizations of the wounded healer phenomenon. Using the Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001), this study explored whether these variables may promote emotion identification, which research has indicated is an empathic ability (e.g., Wai & Tiliopoulos, 2012). Emotion identification accuracy with negative and neutral valences (EINNV) was measured. The influences of emotion regulation and self-differentiation were also explored. Participants were 226 primarily trainee therapists who completed an online protocol. Although no significant relationship was found between anxious attachment and EINNV, results found that greater anxious attachment significantly predicted greater SPS, replicating previous findings, and that SPS significantly predicted greater EINNV. Emotion regulation and self-differentiation were not found to promote EINNV. Regarding exploratory questions, no significant positive relationships were found between personal therapy and emotion regulation, self-differentiation, or emotion identification. This study was the first to study SPS in therapists and discover a relationship between SPS and EINNV. Implications for psychotherapeutic treatment, as well as limitations and future directions, are discussed.

Acknowledgements

It has been a long journey pursuing my Ph.D. in Clinical Psychology, and, as is often the case, one that has often been filled with challenge. However, even in the most challenging moments, I never ceased to be grateful to have had the opportunity to study that about which I am most passionate and with which I most identify, and to be doing what I most love. Thank you to the Clinical Psychology faculty at LIU-Brooklyn for believing in me and giving me this extraordinary opportunity.

Of course, I thank my dissertation committee, Lisa, Nick, and Sara, for all their insights and guidance in making this project the best it could be. To Lisa, the Chair of my committee, thank you for approaching me in my second year and suggesting we do an Independent Study together to try and cultivate a project. You saw this dissertation through from before there was even a seed to cultivate. A most special thank you to Kara and Sara. I shudder to think where I would have ended up without your consistent and invaluable guidance and support over the last year and a half. You got the short end of the stick in our support group, and I am forever grateful and indebted to you. My most heartfelt gratitude goes also to my extraordinary parents, without whom none of this would have been possible. I am the most blessed person on Earth to have you, with your most unconditional love and support, as my parents. Finally, thank you to my dear friends; and to James, who stuck with me no matter what.

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CHAPTER I

Introduction

Decades of research have indicated therapist empathy as the greatest predictor of good overall treatment outcomes (Wampold & Imel, 2015). This relationship has compelled researchers to explore factors that promote or inhibit therapist empathy. One finding from the research is that empathic ability, in general, is hindered when one is under distress (Decety & Meyer, 2008; Gery et al., 2009; Mikulincer et al., 2005). This is true whether it relates to general feelings of discomfort and unpleasantness, being emotionally overwhelmed, or a more specific kind of distress, discussed below, called personal distress empathy. The phenomenon of distress interfering with empathy is understood to be due to the self-focus, rather than other-focus, that distress promotes (Batson & Powell, 2003), with the emotional overload caused by distress interfering with the ability to accurately read others, feel for others, or offer help (e.g., Decety & Meyer, 2008).

However, although distress is traditionally understood to interfere with empathy, there is also evidence that factors related to distress, under certain circumstances, may actually help promote empathic ability. This premise is suggested, for example, in the literature identifying some effective therapists as "wounded healers" (e.g., Zerubavel & Wright, 2012). This literature suggests that therapists' own "woundedness" or personal experiences of suffering, can make them *more* attuned to the suffering of others, promoting empathy, insight, sensitivity, and understanding in their work with clients (see also Hanshew, 1998; Wolgien & Coady, 1997).

Sensory processing sensitivity (SPS), a trait characterized by heightened reactivity to sensory stimuli (Aron, 2018), is related to anxious attachment (Jerome & Liss, 2005; Levit-Binnun et al., 2014; Meredith et al., 2016; Meyer et al., 2005) and both are associated with distress. However, there is evidence that anxious attachment and SPS may, nevertheless, help promote certain empathic abilities, making them possible operationalizations of the wounded healer construct. In particular, some literature has suggested that these variables may facilitate emotional attunement. The social hypervigilance of anxious attachment, borne of the distress associated with an inconsistently available caregiver in childhood, may foster a more practiced reading of others' emotions (Fraley et al., 2006; Mikulincer & Shaver, 2003), while the sensitivities of SPS, promoting their own distress, may also facilitate a more sensitive recognition of others' experience (Acevedo et al., 2014).

Such emotional attunement may, furthermore, be greater in therapists than non-therapists. The motivation for attunement and opportunities for its cultivation in psychotherapeutic work, as well as evidence of therapists' greater ability to manage distress in the moment (Hassenstab et al., 2007; O'Brien & Haaga, 2015), may help promote therapists' ability to accurately identify others' emotions. Finally, the empathic potential of anxious attachment and SPS would seem to be maximized by two abilities found to be critical to promoting empathic ability by diminishing the emotional overload that may otherwise interfere with it: emotion regulation and self-differentiation (Decety & Meyer, 2008).

The broader literature assessing the relationship between anxious attachment and emotion identification is mixed, however. Although some research has suggested that

anxious attachment may help promote accurate identification of others' negative and neutral emotional expressions, as it is these emotions that are most interpersonally threatening, some studies did not find a positive relationship between anxious attachment and emotion identification accuracy. However, the methods of much of the research specifically exploring the relationship between anxious attachment and identification of different emotional valences are problematic. Furthermore, this relationship has not been adequately studied in therapists and no study has included emotion regulation and self-differentiation in its assessment of this relationship.

SPS, with its empathic potential and empirically demonstrated relationship to anxious attachment, may be a factor contributing to emotional attunement in anxious individuals, although this possibility has never been previously explored. Although SPS is often associated with empathy, and neuroimaging research with samples of non-therapists has suggested that highly sensitive people have greater empathy and cognitive activation when viewing facial expressions (Acevedo et al., 2014), research specifically on SPS and emotion identification is almost non-existent.

The present study therefore, explored whether anxious attachment promotes more accurate identification of negative and neutral emotional valences in therapists with greater emotion regulation and self-differentiation abilities. Because of SPS's relationship to anxious attachment, it furthermore explored whether SPS may be a factor promoting this emotional attunement in anxious therapists. If anxious attachment and SPS can, indeed, help promote accurate emotion identification, it may lead to new understandings of these constructs and their potential to work in the service of psychotherapeutic treatment.

The following literature review will first describe the wounded healer phenomenon. It will then address anxious attachment as a construct within the context of the wounded healer phenomenon, before turning to SPS, its relationship and interaction with anxious attachment, and how it too may be viewed as a potential operationalization of the wounded healer phenomenon, perhaps further promoting emotional attunement in anxious therapists. The literature review then provides a rationale for why a therapist sample was used, as well as why, based on the research, emotion identification is considered an empathic ability. After this, the research suggesting a relationship between anxious attachment and emotion identification, as well as between SPS and emotion identification, is reviewed. Finally, a rationale is offered for why emotion regulation and self-differentiation were included as prospective moderators in the present study.

CHAPTER II

Literature Review

The Wounded Healer

Despite the reliable finding that personal distress interferes with one's empathic ability, a sizeable body of literature has argued that experiences of suffering may serve to promote in the sufferer an ability to heal others. This "wounded healer" hypothesis is often applied to therapists, many of whom were inspired to pursue psychotherapy careers by their own experiences of "woundedness" (Barr, 2006) and who use these experiences in their "healing" of clients. In fact, in a qualitative study (Wolgien & Coady, 1997) based on interviews with 8 therapists who were identified by other therapists for their particular effectiveness, the researchers found that, "(p)rimarily, it was therapists' struggles with difficult personal issues and experiences of oppression that allowed them to be sensitive to and supportive of clients' difficulties and to develop respectful, meaningful relationships with them" (p. 32). The authors of the study elaborated that this promoted a mutually beneficial dynamic between therapist and client in which the clients not only learned from their therapists, but the therapists learned from their clients. This dynamic, in turn, further cultivated these therapists' "sensitivity, empathy, interest, respect for the normalcy of human problems, humility, and openness to ongoing personal/professional learning" (p. 32).

The concept of the "wounded healer" actually goes back to Greek mythology, and, as it relates to psychotherapy, the forefathers of psychology, Carl Jung and Sigmund Freud. Both Jung and Freud underwent periods of suffering, from which they emerged transformed, using their experience and their recovery to inform their psychotherapeutic

work with clients (Jamieson & Scherman, 2014). In fact, it was Jung who developed the concept of the "wounded healer," taken from the Greek myth of the centaur (half-man and half-horse) who became known as the "Wounded Healer" after he was poisoned by Hercules's arrow (Barr, 2006). Drawing from his own experience of suffering, healing, and later applying this experience in the promotion of his clients' healing, Jung wrote, "a good half of every treatment that probes at all deeply consists in the doctor's examining himself…it is his own hurt that gives the measure of his power to heal. This, and nothing else, is the meaning of the Greek myth of the wounded physician" (Jung, 1966, p. 116). This healing process between the wounded therapist and their client is thought to be initiated when the client's own wounds reactivate that for the therapist, beginning an unconscious dynamic between the two in which each party helps inform the healing or re-healing process in the other. As Sedgwick asserts, "the therapist's pathology enables the transference to occur, and the transference in turn facilitates the cure" (Sedgwick, 1993, p. 83).

From her research with 253 therapists, Barr (2006) found that 73.9% of the participants experienced a wounding experience that helped inform their decision to become therapists. The nature of these experiences varied significantly and included abuse, relationships with family, mental health issues (their own or others'), grief, issues with physical health (their own or others'), and life-threatening experiences (Barr, 2006). In sum, this research on the wounded healer phenomenon tells us that, not only are a majority of therapists propelled, at least in part, into this helping profession because of an experience of suffering, but that, in fact, it is this very suffering, a concept related to

distress, which is among the factors most enabling the empathy, insight, and sensitivity promoting client healing.

Anxious Attachment

Anxious attachment, with its relationship to distress and potential empathic ability borne of this distress, is one construct that may be distinctly applicable to the wounded healer phenomenon. An explanation of anxious attachment and how it is often measured is first offered, followed by a discussion of the psychotherapeutic implications of therapists' anxious attachment, including, as proposed by the wounded healer hypothesis, the possible empathic advantages of anxious therapists. Attachment theory holds that infants have a biologically based need for an attachment with a primary caretaker who is attuned and responsive to their emotional and physical needs. To that end, infants seek to maintain physical proximity to the "secure base" of their caretaker in anxiety-provoking situations, a behavior that's evolutionarily programmed to ensure their very survival (Bowlby, 1969). However, infants with an anxious-ambivalent or anxious attachment pattern experience their caregivers as inconsistent in their attunement, and respond with distress and clinginess. During the Strange Situation paradigm, designed by Mary Ainsworth (Ainsworth, 1979), anxious toddlers are noted to be particularly distressed by their caregiver's departure from the room. Although they cling to their mother after she returns, they may simultaneously be rejecting of her and remain distressed and unsoothed by her return (Ainsworth, 1979).

Whether or not the infant felt their primary caretaker was reliably available and responsive to their needs has profound and far-reaching implications for, among other things, their development, mental health, and adult relationships. In fact, the kind of

attachment infants experience with their primary caretaker form “inner working models” (Bowlby, 1969), thereby shaping how they perceive, process, understand, and respond to emotionally and relationally resonant information throughout life. For this reason, there has been a vast literature regarding adult attachment styles.

Primary ways of assessing attachment in adults include the Adult Attachment Interview (AAI; George et al., 1985), the Adult Attachment Projective Picture System (AAP; George & West, 1999), and self-report measures. These self-reports include the Relationship Questionnaire (RQ-CV; Bartholomew & Horowitz, 1991), the Experiences in Close Relationships scale (ECR; Brennan et al., 1998) and the Experiences in Close Relationships-Revised (ECR-R; Fraley et al., 2000). Self-report questionnaires are designed to assess respondents’ current attachment style within the context of their adult romantic or close relationships. They are not only different than observational methods in how they go about assessing respondents’ attachment, but they also produce slightly different categorizations of attachment status. Self-report measures mainly assess adult attachment along two dimensions: anxiety and avoidance. Although one can be high or low on both (in addition to being high on one dimension and low on the other), anxious attachment is associated with a negative view of the self, dependence on others, and preoccupation with relationships; while avoidant attachment is associated with a negative view of others and an avoidance of close relationships or emotional intimacy (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998). The two dimensions of anxiety and avoidance produce four different quadrants or categorizations of adult attachment style: secure attachment (characterized by both low avoidance and low anxiety), preoccupied attachment (characterized by low avoidance and high anxiety),

dismissive attachment (characterized by high avoidance and low anxiety), and fearful attachment (characterized by both high avoidance and high anxiety). Attachment styles characterized by high avoidance or/and high anxiety are considered insecure attachments.

Research has suggested that therapists with an insecure attachment status comprise about 36% of therapist samples (Petrowski et al., 2013), and these attachment styles in therapists have been found to interfere with empathic ability (e.g., Parpottas & Draghi-Lorenz, 2015). Anxious therapists, for example, report more ruptures than secure therapists (Marmarosh, 2014), and have been rated by independent observers as responding less empathically to hypothetical clients suggesting alliance ruptures (Rubino et al., 2000). Perhaps relatedly, research has established a positive relationship between anxious attachment and personal distress empathy (PDE) (Britton & Fuendeling, 2005; Mikulincer et al., 2005), a construct demonstrated to interfere with empathic capacity and helping behavior. PDE refers to the state of feeling scared, overwhelmed, and helpless when involved in or witnessing emergency situations (IRI; Davis, 1983). Whereas empathic concern involves compassion for others and a desire to help, PDE instead promotes a state of self-focused distress in response to another's suffering, and a desire to decrease one's own discomfort over the other's (Batson & Powell, 2003). Because of this distress and self-focus, PDE is not associated with effective psychotherapeutic work and positive treatment outcomes (Laverdière et al., 2019), and research has correlated it with compassion fatigue and burnout in licensed clinical social workers (Thomas, 2013). Interestingly, therapists report less PDE on the IRI than non-therapists ($F = 8.80$, $p = 0.005$) (Hassenstab et al., 2007). This finding that therapists report less PDE than non-therapists and therefore may have greater resources for empathic capacity, is interesting

in light of Barr's finding that about 74% of therapists have had an experience of suffering that informed their decision to become therapists (2006). It not only supports that "woundedness" does not necessarily lead to reduced empathic capacity, but that, in fact, it may be positively related to healing ability.

Early Relational Trauma and the Wounded Healer Therapist

The wounded healer literature challenges the conclusion that anxiously attached individuals are empathically limited. This literature, in fact, has argued that those with early relational trauma (and who are, therefore, more likely to develop an anxious attachment style) may hold particular empathic capacities (e.g., Cohen, 2009; Trusty et al., 2005). To begin with, much research has indicated that there is a higher rate of early relational trauma or troubled family backgrounds among psychotherapists than other professionals (e.g., Farber et al., 2005; Orlinsky & Rønnestad, 2005), suggesting that people with such experiences may be more compelled to pursue a career as a therapist and help others. There are a few hypothesized reasons for this, including that such individuals are looking to address their own issues through those of their clients (e.g., Jackson & Nuttall, 1997); or to feel gratified again, as they did as children, in the role of caretaker (e.g., DiCaccavo, 2002).

The wounded healer hypothesis, however, goes further, claiming that it is not only that those who experienced early relational wounds who may be more compelled to heal others, but that they may, in fact, have greater abilities to do so. In more than one study of master's level therapy students, for example, researchers found that the student therapists who reported their childhood relationships with their parents as lower in quality actually had greater therapeutic effectiveness (Watts et al., 1995; Wilcoxon et al., 1989). In

addition to more general therapeutic capacities, therapists who experienced early relational trauma may also be more specifically adept at identifying, empathizing with, and treating trauma in their clients (e.g., Cohen, 2009). In the broadest terms, perhaps the wounded therapist's sensitivity to their own wounds may make them more sensitive to those of others.

Anxious Attachment and the Wounded Healer Therapist. Research has suggested this relationship between early relational trauma and empathic or therapeutic ability is especially applicable to anxious, as opposed to avoidant, attachment. (e.g., Trusty et al., 2005). Whereas avoidant individuals avoid their own as well as others' emotions, as well as avoid intimacy, anxious individuals do the opposite, and in fact engage in "hyperactivating strategies" (strategies prompted by an interpersonal hypervigilance in the attempted service of their relationship to others) (e.g., Mikulincer & Shaver, 2003), which may have positive implications for their interpersonal attunement.

As infants, anxious individuals desperately seek proximity and responsiveness from an inconsistently attuned caregiver. This pressing goal, and the fear of not meeting it, promotes in them a hypervigilance to signs concerning their caregiver's availability (Bowlby, 1969). Because they never felt adequately reassured and gratified by their primary early relationship with their caregiver, anxious individuals continue to be preoccupied with relationships as adults, displaying similar surveillance behaviors to assess the emotions of others and identify signs of interpersonal threat, such as rejection or abandonment (Mikulincer & Shaver, 2017). Attachment theorists (e.g., Cassidy & Kobak, 1988; Main, 1990) have identified these hyperactivating strategies as one of the two main "secondary attachment strategies" of insecure attachment (with the other being

the “deactivating strategies” seen in avoidant attachment), and the primary strategy used by anxious individuals when they do not feel that their attachment needs are being met. So central are these hyperactivating strategies to anxious attachment that they are referred to as “the key underlying characteristics of the anxious attachment style” (Mikulincer & Shaver, 2003, p.81).

As the wounded healer’s ability to help others may be borne of an experience of suffering, perhaps some of the anxious individual’s interpersonal attunement may be borne of the distress caused by a less available caregiver, and a desire to compensate for this failed attachment. This ability may also be translated to the therapy room. It may be because of this intense focus on relationships, for example, that anxious therapists have been found to at least have greater client-rated alliance in the early stages of therapy (Marmarosh, 2015), and to exert greater effort attempting to address ruptures in their relationships with their clients (Marmarosh et al., 2014).

In addition to greater emotional attunement, anxious therapists may also experience greater emotional empathy, as found by Trusty et al. (2005) in their study with 143 masters-level counseling students. Using the Attachment Style Questionnaire (ASQ; Feeney et al., 1994) and the Questionnaire Measure of Emotional Empathy (QMEE; Mehrabian & Epstein, 1972), Trusty et al. found a significant and positive relationship between anxious attachment and emotional empathy (critical ratio = 3.69, $p < .001$), with emotional empathy defined by the developers of the QMEE as "a vicarious emotional response to the perceived emotional experiences of others" (Mehrabian & Epstein, 1972, p. 1).

How then can this finding be reconciled with research associating anxious

therapists with lower empathic ability in general (e.g., Parpottas & Draghi-Lorenz, 2015), or with more alliance ruptures in sessions (Eams & Roth, 2000; Marmarosh et al., 2014)? One answer may lie in anxious individuals' propensity to resonate *too* intensely with what others may be experiencing, without recognizing the boundaries between what it is that they themselves are experiencing and what the other is experiencing. This kind of emotional over-identification has been associated with high scores on the QMEE (McIntyre et al., 2017). McIntyre et al. also speculated that high levels of empathy on the QMEE may promote the development of "fantasy bonds," which are "both the original imaginary connection formed during childhood and the transference of this internal image of oneness to significant others in the adult's intimate associations" (Firestone et al., 1987, p. 2). This overinvestment (which may be confused with empathic ability) actually interferes with one's ability to remain emotionally balanced and maintain the mental resources to accurately perceive and effectively respond to others in distress.

This vulnerability may help explain some of the previously mentioned challenges anxious therapists face in the therapy room, such as anxious therapists self-reporting more ruptures in the therapeutic alliance (Eams & Roth, 2000), and psychotherapy research suggesting that therapists with insecure attachment are inhibited from responding effectively to ruptures in the therapeutic alliance (Eams & Roth, 2000; Marmarosh et al., 2014; Rubino et al., 2000). Safran refers to alliance ruptures as "empathic failures" (1993), promoted by an inability to effectively mirror the client, which may reflect a therapist's own attachment history (Safran et al., 1994). While ruptures are inevitable experiences in psychotherapy and should be considered opportunities to deepen a patient's understanding of themselves in relationships (Safran

& Muran, 2000; Muran & Eubanks, 2020), anxiously attached therapists may be particularly susceptible to feeling emotions *too* intensely or over-identifying with patients, thereby increasing the likelihood of ruptures. This inclination may be due at least in part to hyperactivating strategies and the weaker interpersonal boundaries associated with anxious attachment, promoting an emotional overload, that, if not properly managed, interferes with their empathic capacity.

For such reasons, both psychoanalytic theory (e.g., Buechler, 2008) and neuroscience research (e.g., Decety & Lamm, 2009) have argued that interpersonal boundaries, or the ability to differentiate between the experience of self and other, is one of the most critical components of empathic ability, as is effective emotion regulation (e.g., Decety & Lamm, 2009; Eisenberg et al., 1994). The present study, therefore, explored whether more anxious therapists would have greater empathic ability (emotional attunement) than less anxious therapists if their vulnerability to emotional overload was managed by greater self-differentiation and emotion regulation, both constructs discussed later in this review. If so, such a finding could help support the conceptualization of anxious therapists as potential wounded healers.

Sensory Processing Sensitivity (SPS)

Sensory processing sensitivity (SPS) is a lesser-known construct which may be a factor in the development of an anxious attachment, playing a role in the complex connection between distress and empathic capacity. A description is first offered of this construct, before turning to its relationship and interaction with anxious attachment, and its possible relationship to the wounded healer phenomenon.

Not to be confused with Sensory Processing Disorder, SPS is a genetically determined trait characterized by greater emotional and physiological responsivity to sensory stimuli and deeper cognitive processing (Aron, 2018). The Highly Sensitive Person Scale (HSPS; Aron & Aron, 1997), the self-report tool developed to measure this trait, assesses sensitivity to sensory stimuli such as loud noises, pain, caffeine, hunger, other people's moods, environmental subtleties, and violence. Highly sensitive people are also more likely to have a "rich, complex inner life," be "deeply moved by the arts or music," and "get rattled when [they] have a lot to do in a short amount of time" (HSPS; Aron & Aron, 1997). The approximately 20% of the population who possess this trait (termed "highly sensitive people") have been found to be more easily overwhelmed and overstimulated, and may be more behaviorally inhibited and cautious, preferring to pause and consider their options before acting (Aron, 2018). SPS has only recently been discussed in the psychology literature and is often confused with, or mistakenly subsumed under, shyness, anxiety, introversion, and emotionality, to which it is only partially related (Aron & Aron, 1997).

The SPS trait is found in over 100 species and is understood as an evolutionarily advantageous survival strategy to better respond to the environment, gather resources, and avoid threats. There are costs, however, associated with the greater caution, reflection, and cognitive processing characteristic of SPS, such as time; and physical, mental, and emotional energy. Because of these costs and the fact that this trait would cease to be advantageous if a majority of species possessed it, it is found only in a minority within a particular species (Acevedo et al., 2018).

SPS and Anxious Attachment

The link between SPS and anxious attachment is an example of the meaningful interaction between temperament and environment, although this dynamic would seem to start with SPS. Because SPS is understood to be a genetically determined trait (e.g., Aron, 2018), it would seem children are born highly sensitive, a trait which may predispose them to an insecure attachment. Although repeated studies have demonstrated that highly sensitive people are more positively influenced by positive environments than non-highly sensitive people, research has also repeatedly found that they are more negatively influenced by negative environments (e.g., Aron et al., 2012). For highly sensitive children, this means they may be more negatively impacted by caregiving environments in which they perceive hostility, neglect, invalidation, or less-than-desired responsiveness (e.g., Aron & Aron, 1997; Aron et al., 2005). It is also probable that highly sensitive children are emotionally needier and difficult to parent than non-sensitive children, prompting frustration in the caregiver and perpetuating a maladaptive infant-caregiver cycle which may also help promote the development of anxious attachment (Levit-Binnan et al., 2014).

The literature has addressed the relationship between SPS and anxious attachment both conceptually and empirically. Studies with non-therapists that have explored this relationship have found a reliable significant positive correlation (ranging from low to moderate in magnitude) between constructs related to sensory sensitivity (including SPS) and anxious or insecure attachment (Jerome & Liss, 2005; Levit-Binnun et al., 2014; Meredith et al., 2016; Meyer et al., 2005). Most of these studies used the ECR to assess attachment, although not all used the SPS construct (as assessed with Highly Sensitive

Person Scale [HSPS; Aron & Aron, 1997). Instead, some studies used the Adolescent/Adult Sensory Profile (AASP; Brown & Dunn, 2002), also a self-report measure, to assess the related construct of sensory responsiveness. A construct more often discussed in the occupational therapy literature, sensory responsiveness is a related but much narrower construct than SPS. Whereas SPS relates to sensory stimulation, emotional arousal, and cognitive processing, among other things, sensory responsiveness more concretely refers to the way the brain processes and manages sensory information (Levit-Binnun et al., 2014). The Adolescent/Adult Sensory Profile (AASP) is based on a two-dimensional model of sensory responsiveness, with these dimensions being neurological threshold (sensory sensitivity) and behavioral response strategy (passive, as in just responding to sensory stimuli; or active, as in actively avoiding or seeking stimuli) (Dunn, 2001). The four quadrants produced from these two dimensions are sensory avoiding, sensory seeking, low registration, and sensory sensitivity.

Sensory sensitivity is this model's counterpart to SPS, referring to those with a low neurological threshold and a passive response strategy, although, as mentioned, not comprising the emotional and cognitive responsivity also found in SPS. It is precisely because SPS is a broader construct, incorporating cognition and emotion, that it is the construct used in the present study instead of sensory sensitivity. As further discussed below, this breadth carries implications for both distress and empathy, as encapsulated in the wounded healer phenomenon. Relatedly, the incorporation of greater cognitive and emotional responsiveness in SPS suggests that it may promote greater anxious attachment than sensory sensitivity.

Using this AASP model, three studies (with non-therapists) (Jerome & Liss, 2005;

Levit-Binnun et al., 2014; Meredith, et al., 2016) found a relationship between sensory sensitivity and anxious attachment, with one of these studies (Meredith et al., 2016) also finding this correlation between the HSPS-Shortened Version (Aron et al., 2010) and anxious attachment. Additionally, Meyer et al. (2005), who used the full Highly Sensitive Person Scale (HSPS; Aron & Aron, 1997) to assess this relationship, found a significant correlation between SPS and the Upset and Misunderstood subscale of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) (only the Inventory of Parent Attachment was used in the study), suggesting a positive relationship between SPS and insecure attachment.

One factor which may promote this link between SPS and insecure attachment is highly sensitive people's greater inclination to negative affect, particularly anxiety (e.g., Liss et al., 2005). Anxiety can sensitize an infant to environmental shortcomings, promoting an anxious attachment. The link between SPS and anxious affect is evidenced by the finding that the personality characteristic most strongly associated with SPS is neuroticism (Aron et al., 2012; Liss et al., 2008; Smolewska et al., 2006). In the major study assessing this relationship, this correlation ($r = .45$, $p < .01$) was established by testing relationships between the HSPS and personality characteristics using the Neuroticism-Extraversion-Openness Five-Factor Inventory (NEO-FFI) in a sample of 851 University of Waterloo students (Smolewska et al., 2006). The anxiety and sensitivity to threat associated with sensory sensitivity may promote anxious attachment by making one more needy and dependent on others (Jerome & Liss, 2005). Such children may need particularly responsive caregivers who can help mitigate the emotional and physiological activation they feel due to their sensitivity.

Research has also more directly suggested the link between this negative affect and insecure attachment in highly sensitive people. In a series of three studies, Aron et al. (2005) found that those who scored highly on the HSPS and also reported a difficult childhood, scored particularly highly on assessments of negative affect. Although the studies specify only a correlational and not a causal relationship, it is likely that negative affect and having a troubled childhood have reciprocal interactions in highly sensitive people, with negative affect promoting the chances that one will perceive their childhood as difficult, as well as the perception of having had a difficult childhood further promoting negative affect.

The three studies conducted by Aron et al. (2005) included a total of 705 American undergraduates. Although all studies used the HSPS to assess for SPS, each used a different combination of measurements to assess the quality of childhood attachments as well as negative affect. Childhood attachment assessments included a six-item measure used by Aron and Aron (1997) asking questions such as "was mental illness a problem in your immediate family while you were growing up?"; the Parental Bonding Instrument (Parker et al., 1979), which asks participants to rate 25 statements; and participant ratings of actual and desired closeness with their mother at various ages growing up. All three studies found medium to large correlations, among those who are more highly sensitive, between the reporting of more troubled childhood attachments and reported negative affect. The magnitude of these correlations was much lower for non-highly sensitive participants.

This section has reviewed the construct of SPS, its relationship to anxious attachment, and its association with distress, which helps promote its relationship with

anxious attachment. Like anxious attachment however, SPS also holds unique empathic advantages, discussed in the next section. Furthermore, as with anxious attachment, SPS's relationship with both distress and empathy also suggest it as a potential operationalization of the wounded healer phenomenon.

SPS and the Wounded Healer

Although it is unclear whether he believed there was a relationship between the two, it is noteworthy that it was Carl Jung, who coined the term "wounded healer," who also first spoke about "a certain innate sensitiveness" (Jung, 2013, para. 399), the construct which has been more recently developed as SPS. Just as the anxious individual's hyperactivating strategies, borne of the distress associated with their early relationship with their caregiver, may promote an interpersonal attunement; so the highly sensitive person's sensitivities, which also predisposes them to feeling overwhelmed and distressed, may simultaneously promote sensitivity to the experience of others. Indeed, despite this greater vulnerability to distress, highly sensitive people are often associated with empathy (e.g., Acevedo et al., 2014; Aron, 2000; Aron, 2012). To begin with, highly sensitive people have been found to report greater empathic concern than non-highly sensitive people (Gearhart, 2011). They are furthermore characterized by their propensity to feel things more deeply and to be more emotionally responsive than others (e.g., Aron, 2012; Aron, 2000; Jagiellowicz et al., 2016). Their more deeply felt emotions compel deeper cognitive processing, an inclination that draws highly sensitive people towards reflection, deeper conversation, and the richness and complexity of inner worlds (e.g., Aron & Aron, 1997; Aron, 2000), traits conducive to empathic and helping ability. Relatedly, highly sensitive people have greater awareness and responsiveness to social

stimuli and others' moods, a propensity which prompts Aron, the developer of the HSPS (Aron & Aron, 1997), to assert that they are able to listen more "empathically" to others (2000, p.174), and "are more aware of what other people are feeling, what they want and need" (2000, p. 56). This attunement is reflected in some of the items on the HSPS, such as, "Do other people's moods affect you?", and, "When people are uncomfortable in a physical environment do you tend to know what needs to be done to make it more comfortable (like changing the lighting or the seating)?" (HSPS; Aron & Aron, 1997).

SPS and the Wounded Healer Therapist. Given their interest and cultivation of their "inner world," as well as their inclination towards reflection and deeper cognitive processing, it may be that highly sensitive people are more drawn to psychotherapeutic work and are better represented in the mental health profession. Although the rates of highly sensitive people among the therapist population have not previously been studied, Aron et al. (2005), having conducted various studies with undergraduate populations, report that the proportion of undergraduates who can be considered highly sensitive is greater among psychology students, which may possibly suggest a higher proportion among therapists. In addition to deeper emotions, thought, and reflection perhaps drawing highly sensitive people to psychotherapeutic work, their vulnerability to distress may also play a role. SPS's potential to promote distress, and its relationship to anxiety, depression, and emotionality (Aron & Aron, 1997), may also help compel highly sensitive people to psychotherapeutic work. Such work may resonate with their own struggles, or help them gather insight into their own struggles, just as the person who has experienced early relational trauma may, for similar reasons, become a therapist.

The literature review has described the wounded healer phenomenon as a conceptual framework for understanding how anxious attachment and SPS may predispose therapists to both distress *and* empathic ability. This review now turns to an empirical examination of the relationship between these variables and a particular empathic ability, on which the present study focused: emotional attunement. As suggested previously, the hyperactivating strategies associated with anxious attachment may promote an emotional attunement in anxious individuals. It is argued that the trait of SPS, possibly helping to promote an anxious attachment and carrying its own empathic advantages, may be a factor contributing to this emotional attunement in anxious therapists.

A rationale for why therapists may be better at emotional attunement is now offered, followed by a review of the research suggesting these variables' potential promotion of emotional attunement. For anxious individuals, this attunement may be particularly pronounced with the identification of negative and neutral valences. Finally, two variables that have been demonstrated to be critical to diminishing distress and promoting empathic ability, emotion regulation and self-differentiation, are discussed. These variables served as moderators in the present study, with the expectation that they will enhance emotional attunement in anxious and highly sensitive therapists.

Therapists and Healing Ability

The probability that anxious and highly sensitive individuals may hold advantages in emotion identification would seem enhanced in therapists, a group uniquely poised for emotional attunement. As discussed earlier, the majority of therapists are at least partially compelled into psychotherapeutic work by an experience of "woundedness" (Barr, 2006),

which, as suggested in the wounded healer literature, may promote their capacity for empathy and attunement (e.g., Hanshew, 1998; Wolgien & Coady, 1997; Zerubavel & Wright, 2012). Therapists are, additionally, uniquely motivated to accurately read emotion, as much of their job depends on their ability to be emotionally attuned to their clients in order to most effectively respond to them. Furthermore, emotional attunement may not only be a skill that therapists are motivated to develop, but one that work in the field inherently cultivates.

Importantly, research has also indicated that therapists may be better at managing distress than non-therapists, an important factor in reducing the emotional overload that interferes with empathic capacity, especially for anxious and highly sensitive individuals. Comparing 19 therapists to 19 non-therapists on the IRI, Hassenstab et al. (2007) found that therapists reported significantly less PDE than non-therapists. Similarly, O'Brien and Haaga (2015) found that non-therapists scored significantly higher than therapists on a measure of compassion fatigue, suggesting that therapists may be more resilient in the face of distressing material than non-therapists. Their study used a sample of 36 therapist trainees from American doctoral programs and 36 non-therapists. After watching a 20-minute video of a woman detailing a traumatic personal experience, participants were asked to complete an adapted version of the state CF subscale of the Compassion Fatigue Self-Test (CFST; Figley, 1995). It makes sense that therapists reported less compassion fatigue and PDE than non-therapists, given that the often emotionally challenging nature of psychotherapeutic work demands greater emotion regulation ability and training contributes to this competency. Perhaps relatedly, research has shown that therapists are more likely than non-therapists to have been in their own personal therapy, as well as to

have benefitted from therapy (Norcross, 2005). If most therapists are compelled to become therapist at least in part by an experience of "woundedness" as Barr (2006) found, then perhaps this woundedness also compels them into their own personal therapy. In turn, the experience of having been in therapy and benefitted from it may have additional implications for enhanced emotion regulation and empathic ability. Finally, it is possible that other components of psychotherapy training may also contribute to emotion regulation. Therapists are not only forced to confront and engage with unpleasant emotion as an important part of their work, but also to engage with and use their own negative emotion and vulnerability constructively in the room with the client—for example, to help develop the client's self- and interpersonal awareness, or to develop an effective therapeutic alliance and repair ruptures (e.g., Safran et al., 2001).

Emotion Identification's Association with Empathy

The present study explored anxious attachment and SPS's relationship to empathic capacity by assessing whether these variables may promote the ability to accurately identify others' emotional expressions. Research has linked emotion identification to cognitive and affective empathy, although most seem to link it to the latter (Besel & Yuille, 2010; Chikovani et al., 2015; Gery et al., 2009; Wai & Tiliopoulos, 2012). It may also be worth noting that emotion identification may not only be facilitated by empathy, but also help induce further empathy (Gery et al., 2009). For example, the recognition of sadness in another may compel the observer to better feel what the other is feeling and to want to help them, something which may not be possible without that initial recognition, or a misrecognition.

Using a sample of 30 people in a Paris prison (the sample was divided evenly

among sex offenders, non-sex offenders, and prison staff), and images from Ekman and Friesen's (1976) Pictures of Facial Affect to assess emotion identification, Gery et al. (2009) found significant positive correlations between emotion identification and the empathy subscale of the Impulsivity–Venturesomeness–Empathy-7 questionnaire (ES-IVE-7, Eysenck et al., 1985). The empathy subscale of the IVE-7 is comprised of 19 yes/no items, was derived from the QMEE (Mehrabian & Epstein, 1972), and is understood to measure affective empathy. More specifically, correlations were found between this subscale and identification of four of the basic six emotions expressed by models in the Pictures of Facial Affect: disgust, fear, surprise, and sadness; although not happiness or anger.

Besel and Yuille (2010) came to a similar conclusion. Participants were 135 Canadian university students, and the researchers also used photos from the Pictures of Facial Affect, but to assess empathy, used the EQ and the empathic concern subscale of the IRI. Unlike Gery et al., however, Besel and Yuille (2010) manipulated the duration of exposure of the photographs depicting the six basic emotions from the Pictures of Facial Affect. They showed one group the photographs for 50 ms (0.05 of a second), and the other for 2000 ms (two seconds). They found that both the empathic concern subscale and the EQ correlated with accuracy at the 50 ms exposure, although it was empathic concern which explained the EQ correlation. This finding supported theoretical associations between emotional empathy and automatic emotional processing (Besel & Yuille, 2010). Additionally, they found that the EQ, particularly its “social skills” factor, was significantly related to the longer 2000 ms exposure, an easier exercise. The researchers explained this finding by postulating that, at longer exposures, it is cognitive

rather than emotional empathy, and perhaps particularly social skills, which promotes emotion identification among those who have greater difficulty in this area.

Wai and Tiliopoulos (2012), in turn, replicated Besel and Yuille's (2010) investigation with 139 Australian university students and came to the same finding linking empathy and emotion identification. They used the EQ and, instead of the Pictures of Facial Affect, the Self-Assessment Manikin (SAM; Bradley & Lang, 1994), which also consists of black-and-white pictures of faces depicting emotional expressions. The SAM measure used by Wai and Tiliopoulos (2012) included only four emotions in addition to neutral: happy, sad, angry, and fearful. The study concluded that the affective empathy subscale of the EQ was a significant predictor of participants' overall emotion recognition score. Furthermore, the researchers found that primary psychopathy (characterized by lack of empathic ability), as measured by the Levenson self-report psychopathy scale (LSRP; Levenson et al., 1995), was significantly linked to lower emotion identification, offering additional support for empathy's association with emotion identification.

The above studies have all linked accurate emotion identification to empathy using various empathy assessments, including the empathic concern subscale of the IRI, the empathy subscale of the ES-IVE-7, and the affective empathy subscale of the EQ. Rather than the emotion identification measurements used in these studies, however, the present study used the Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001), a more advanced assessment of emotion identification representing an array of complex emotions, and which is less susceptible to ceiling effects. Based on these studies, as well as the fact that the Eyes Test was designed as "an advanced theory of

mind test," with the scale developers describing theory of mind as "overlap[ping] with empathy" (Baron-Cohen et al., 2001, p.241), performance on this measure is considered suggestive of empathic ability. Finally, because many studies have already explored anxious attachment and emotion identification more generally using the Eyes Test, the present study's use of this test to assess emotion identification more specifically with anxious therapists, and with particular emotional valences, allowed for more meaningful comparison and interpretation of findings.

Anxious Attachment and Emotion Identification

Unlike the reliable finding between anxious attachment and PDE, results of studies of the relationship between adult anxious attachment and emotion identification have been mixed. As discussed below, some findings involving non-therapists have suggested a negative relationship between the two (Fraley et al., 2006; Padykula & Horwitz, 2011). For example, Meyer et al. (2004) found that anxiously attached individuals were more likely to see pictures of neutral faces as more rejecting and less friendly. In another, larger study using "morph movies" (which display facial expressions gradually morphing from neutral to an emotional expression, or from an emotional expression to a neutral one), Fraley et al. (2006) found that anxiously attached participants (non-therapists) had faster reaction times compared to less anxious participants in indicating a change in emotional expression, leading to quick emotion judgments and inaccurate emotion identification. Fraley et al. (2006) came to this conclusion after conducting three studies, each with more than 100 participants, mostly women from the U.S., who responded to an online survey that they were told related to attachment style and interpretation of emotional stimuli. Inaccurate emotion identification

with anxious individuals has been understood to be related to their propensity to become more easily overcome with negative emotion, given anxious individuals' social hypervigilance and their generally weaker interpersonal boundaries. As previously mentioned, this emotional intensity can interfere with empathy and accurate perception, inhibiting more objective social appraisal (Decety & Meyer, 2008).

However, other evidence has suggested that anxious individuals may be better at emotion identification in certain circumstances, perhaps due to a relational motivation to accurately read others (Mikulincer & Shaver, 2007). This theory, as previously noted, postulates that the emotionally "hyperactivating" strategies used by anxious individuals increase focus and reflection on others' emotions, enhancing theory of mind (Mikulincer & Shaver, 2003). In fact, some of this evidence comes from this same Fraley et al. (2006) study. In the last study of their larger set of studies, Fraley et al. (2006) actually found evidence contradicting their other findings that anxious individuals are less accurate with facial expression recognition. Fraley et al.'s (2006) fourth study included 142 participants responding to the same online survey mentioned above. Again, most participants were American women, and the ECR-R was used to assess attachment style. In this study, Fraley et al. (2006) found that, unlike when participants were instructed to stop the morph movie at the point they deemed to be the "onset" of emotion, when the movies were programmed to stop at the same time for all participants, anxious individuals were *more* accurate in the emotion identification of the face on the screen than their less anxious counterparts. These findings suggest that anxious individuals are very sensitive to *change* in emotional expression, and that when given the same amount of information, they may be more accurate in identifying emotion than those who are less anxious.

Anxious Attachment and The Eyes Test

With its static images, the Eyes Test is one paradigm that holds stimuli constant. Unlike the morph movie method (Niedenthal et al., 2000), designed to assess the *change* in emotional expression (e.g., the onset or offset of emotion), the Eyes Test was designed to assess the *identification* of an emotional state. Similarly, it does not assess just a few basic emotions as do morph movies or other emotion identification assessments, but may be the only test assessing identification of more sophisticated emotions, such as "contemplative," "preoccupied," and "distrustful." This variety and complexity also means that the Eyes Test does not carry the ceiling effect posed by most other emotion identification measures, including the morph movie method. Although responders only have the eye region from which to make their decision on this measure, it's the eye area that is understood as most expressive of one's emotional state (Handford et al., 2013). In the work of therapists, who must often decipher emotion from little information and nonverbal cues (especially with uncomfortable, less introspective, or less talkative clients), the ability to accurately identify emotion from something as limited as the eye area may be particularly valuable. Finally, with its standardized set of stimuli, the Eyes Test can objectively measure emotion identification without the confounding bias of countertransference, as therapists may have to actual people or clients. As a performance task, it additionally obviates self-report bias.

Like the broader literature, however, research using the Eyes Test to assess the relationship between anxious attachment and emotion identification has returned mixed findings. In the nine studies found using the measure to explore this relationship, two found a positive relationship between anxious attachment and accuracy on the Eyes Test,

one found a negative relationship, and six found no significant relationship. Both of the studies finding a positive relationship found that anxious attachment was related to the more accurate identification of certain kinds of valences, and not all valences. Hunefeldt et al. (2013) found that anxious attachment was related to more accurate identification of neutral and difficult-to-recognize expressions on the Eyes Test, while Meyer and Levy (2009) found it was related to more accurate identification of negative expressions. Both studies used the ECR to assess attachment style. By contrast, the study finding a negative relationship (Padykula & Horwitz, 2011) used the ASQ and RSQ to assess attachment and did not break down the expressions by valence. In addition, Padykula & Horwitz only explored the relationship between The Eyes Test and insecure attachment, not distinguishing, for example, between anxious and avoidant attachment. The six studies finding no relationship all used the ECR, with half breaking down the expressions from the Eyes Test by valence, and half not.

It is likely that whether a study categorizes Eyes Test items by emotional valence or not makes the difference between whether any significant and positive relationships are found between anxious attachment and accurate emotion identification. As the review of the above studies suggests, it seems that any advantage anxious individuals have in emotion recognition (at least for fully formed pictures of facial expressions, unlike in morph movies), may be primarily with certain emotional valences (such as negative valence), and not with all emotional valences.

As noted, the study that found a negative relationship between anxious attachment and the Eyes Test (Padykula & Horwitz, 2012) did not break down Eyes Test items by valence. Of the six studies that found no significant relationship, three

categorized items by valence. However, as has very recently been confirmed by Hudson et al. (2020), different valence categorization systems (based on ratings by different pilot samples in different studies), can produce very different outcomes regarding emotion identification accuracy, and sample size significantly impacts how different items are categorized, due to the resulting sample error in estimates. Two of the three studies (Cotler, 2012; Wilson, 2010) that broke down Eyes Test items by valence but found no significant results between higher levels of anxious attachment and emotion identification accuracy did use the same valence categorizations, but these categorizations were based on a sample of only 17 students. In contrast, the present study used the most robust valence ratings to date, based on 164 students, the largest sample to rate the valence of Eyes Test items (Hudson et al., 2020). Furthermore, for the most statistically sound and reliable analyses when using Eyes Test valence categorizations, the present study combined negative and neutral valences into one group, a method no other study exploring these relationships seems to have used. The benefits of this approach for the validity and reliability of the statistical findings is discussed in greater detail in this paper's Method section.

Finally, it is noteworthy that only one of the studies included in the literature review used a therapist sample (Hill, 2013), and this study did not categorize Eyes Test items by valence. Hill's thesis project used a small sample of 20 therapists, nearly all of whom were practicing with a relevant master's or doctorate degree. The author found no significant relationship between anxious attachment and performance on the Eyes Test. The effect size was very small (r = -.08) so the results were not an issue of low power. However, in addition to not breaking down expressions by emotional valence to explore

whether anxious therapists may be better than their non-anxious counterparts at identifying certain expressions over others, Hill's study, as with all relevant studies, did not explore the possible influence of emotion regulation and self-differentiation on performance. These variables may be critical in maximizing any emotion identification advantages in anxious individuals.

Neutral and Difficult-to-Recognize Valences. It may be helpful to explore in greater detail the Hunefeldt et al. study (2013), which found a positive relationship between anxious attachment and accurate emotion identification of neutral and difficult-to-recognize expressions on the Eyes Test. The 132 Italian undergraduate women who comprised the study's sample were first asked to rate the Eyes Test items on emotional valence (very negative to very positive), as well as arousal (low, medium, and high), using a 7-point Likert scale. Participants then rated the items based on the pictures of the eyes alone. Based on these responses, the researchers then divided the 36 items on the Eyes Text into 3 x 3 subsets: emotional valence (negative, neutral, positive), arousal (low, medium, high), and recognizability (difficult, medium, easy). Each of the three subsets contained a total of 12 stimuli each. The researchers assessed attachment using the Italian version of the original ECR, and not the revised ECR the present study used (though the two are extremely similar). Hunefeldt et al. (2013) found a significant correlation between attachment anxiety and accuracy on neutral and difficult-to-recognize expressions, with greater anxiety associated with greater accuracy on these items (neutral: $r = .19$; difficult-to-recognize: $r = .21$, $p < .05$).

Interestingly, it is possible that the finding that anxious individuals may be more accurate in identifying neutral and difficult-to-recognize expressions on the Eyes Test is

related to the finding from the Fraley et al. study (2006) described above, that, when given the same amount of incomplete visual information (in a morph movie, a still image of a facial emotional expression that is stopped before it is fully formed), anxious participants were more accurate in identifying the emotional expression than less anxious participants. This difference between more anxious and less anxious participants decreases as the stimulus information increases. Naturally, the more fully formed and clear an emotional expression is, the less difference there will be between various groups' abilities to identify the expressed emotion (Fraley et al., 2006). However, this finding regarding less fully formed expressions using morph movies may suggest that anxious individuals have a greater ability to identify ambiguous emotional expressions, such as found with the neutral and difficult-to-recognize Eyes Test items in the Hunefeldt et al. study (2013).

Negative Valence. As noted, Meyer and Levy (2009) found a positive relationship between anxious attachment (using the ECR-R) and accurate emotion identification of negative valence expressions on the Eyes Test. Using a sample of 224 American undergraduate students, they found that the group that was most accurate in identification of negative-valence expressions were preoccupied individuals, or those that were both higher in anxious attachment and also lower in avoidant attachment.

To determine the emotional valence classification of the Eyes Test items, the researchers conducted a pilot study with 40 students using a 7-point Likert scale, as with the Hunefeldt et al. (2013) study. The authors speculated, as other researchers have, that the finding linking anxious attachment and recognition of negative valence items may have been influenced by the "hyperactivating" inclinations of anxious or preoccupied

individuals, who are motivated to read others' emotions in their efforts to gain proximity to them. For those hypervigilant to threat in the interpersonal environment, negative valences are most relevant and significant. As Mikulincer and Shaver (2003) have asserted, anxious individuals may possess a "hypersensitivity to rejection cues" (p.81), and may also be inclined to exaggerate interpersonal threat in the environment. As such, Meyer and Levy (2009) acknowledge that it is also possible that anxious individuals are more likely to perceive negative emotions in others and therefore simply choose more negative emotions on the Eyes Test in general, resulting in them happening to more correctly identify negative versus other valences.

Although not using the Eyes Test, a Japanese study (Kanemasa, 2005) using 161 undergraduates in Japan, also found a positive relationship between preoccupied attachment and identification of negative valence facial expressions. However, these negative emotions were specifically other-oriented (an emotion in response to another person rather than a self-oriented emotion, such as sadness). The study used the ECR, among other measures, to assess for attachment. Emotion identification was assessed with images of facial expressions representing contempt, shame, sadness, happiness, anger, disgust, fear, and surprise that flashed on a screen for 4-6 seconds. The researchers found that participants high in anxiety but low in avoidance were more accurate than other attachment groups in identifying the emotions of anger, disgust, and contempt. They were not more accurate, however, in identifying negative emotions that are self-oriented, including sadness and shame. Additionally, they were less accurate in identifying positive emotion. This finding supports the argument that anxious individuals may be most motivated, and perhaps most practiced, in identifying emotions in others

that pose a particular threat to their relationship with them, as when the other seems to hold a negative view of them.

SPS and Emotion Identification

Given its relationship to anxious attachment and its empathic advantages, perhaps one factor contributing to such emotional attunement in anxious individuals is SPS. Just as anxious individuals' social hypervigilance may promote emotional attunement, so may the highly sensitive person's (HSP) sensitivities. In fact, it may be that SPS in anxious individuals both enhances their hyperactivation (given SPS's association with neuroticism), and sharpens their interpersonal attunement.

As previously discussed, highly sensitive people have greater awareness and responsiveness to social stimuli and others' thoughts and feelings, which may help them better decipher nonverbal cues (Aron, 2010), such as emotional expressions. Depth of processing is another characteristic central to SPS that may further enhance this attunement. Because highly sensitive people are more emotionally responsive to stimuli, they are more compelled than non-highly sensitive people to think about and process things longer and more deeply (e.g., Jagiellowicz et al., 2011). It may be that this deeper cognitive processing has positive implications for attention to, reflection on, and identification of emotional expressions.

According to Aron and Aron (1997), this depth of processing promotes a "depth of discrimination" (p. 350), believed to help highly sensitive people better discern subtle differences and nuance, a discernment which may also apply to emotional expressions. This discernment is supported, for example, in research findings that highly sensitive people show greater brain activation when processing subtle differences in landscape

scenes, as they seem to attend more to minor details than non-highly sensitive people (Jagiellowicz et al., 2011). Similarly, Gerstenberg (2011) found that highly sensitive people were quicker and more accurate in identifying certain letters buried among others in a visual detection task. Perhaps this finer discernment of subtleties associated with highly sensitive people may help promote identification of neutral and more difficult-to-recognize emotional valences, among other emotional expressions, in anxious individuals.

The relationship between SPS and emotion identification accuracy has not been adequately studied, and no study has explored this relationship with a wide array of emotions or with more complex emotions, as in the Eyes Test. Although not exploring emotion identification directly, an fMRI study (Acevedo et al., 2014) suggested that highly sensitive people (non-therapists) have greater brain activation in response to others' moods. Its sample was derived from a larger study of engaged couples and newlyweds in the community, and included 18 participants (10 were women). Participants completed a short-form of the HSP scale and viewed colored photos of their romantic partners, as well as strangers, with positive, negative, and neutral facial expressions. To obviate any ambiguity and enhance the effect of the represented emotion, each photograph was preceded by a description of the person's mood (e.g., "This person is feeling very happy because something wonderful has happened to them"). At the first fMRI scanning, stimuli were presented in random order and in four conditions: partner happy, partner sad, stranger happy, and stranger sad. A neutral condition (partner neutral and stranger neutral) was added one year later with 13 of the 18 participants who repeated this trial then.

Highly sensitive participants showed greater brain activation in response to emotional (sad and happy) than neutral faces; in brain areas associated with attention, awareness, cognitive processing, action planning, and empathy. Additionally, brain activation was greater when they viewed pictures of their significant others and happy expressions. One brain area showing greater activation with more highly sensitive participants was the middle temporal gyrus (MTG), an area known for "emotional meaning making" and characterized as a "semantic hub for language, visual, and auditory processing" (Acevedo et al., 2014, p. 590). This association reinforces the association between SPS and greater attunement and responsivity.

Acevedo et al. (2014) also found that highly sensitive participants had greater activation in brain areas more directly associated with empathy. In all conditions aside from the sad stranger condition, SPS was positively associated with activation of the insula. Importantly, insula activations in this study were found in an area similar to that noted in a meta-analysis of empathy studies (Fan et al., 2011), and the insula is connected with other areas of the brain dealing with emotion recognition and interpretation, such as the inferior frontal gyrus (IFG) (which showed greater activation for highly sensitive participants in all conditions that they associated with a positive emotion in their post-viewing emotion rating). The IFG, in turn, is thought to be part of a Mirror Neuron System (MNS) that allows people to quickly identify others' desires and intentions (Acevedo et al., 2014). This is an important association, as some researchers have asserted that mirror neurons are the neural basis for emotions such as empathy (Blakeslee, 2006), as well as linked mirror neuron systems to theory of mind (Arbib, 2004), the precise empathic skill that the Eyes Test was designed to assess.

Acevedo et al. (2014) speculated that highly sensitive participants' greater responsiveness to photos of significant others and happy expressions may be a conservation strategy to avoid excess negative stimulation. They, therefore, do not suggest that highly sensitive people may be less accurate in identifying negative or neutral facial expressions. Taken together, Acevedo et al. (2014) offers strong empirical support for highly sensitive people demonstrating greater attention, responsiveness, attunement, and empathy upon viewing facial emotion expressions. However, they did not specifically explore highly sensitive people's abilities in emotion identification, which remains a gap in the literature.

Moderators: Emotion Regulation and Self-Differentiation

Unlike the broader distress or experience of suffering that may exist in the background of the wounded healer's psyche, active distress in the foreground can significantly impede empathic ability. Emotion regulation and self-other awareness (or differentiation) are perhaps the two most important factors in the promotion of empathy (Decety & Meyer, 2008), including the accurate reading of others' feelings, as they help significantly manage such empathy-interfering distress. As with other studies, Decety and Meyer (2008) assert that "genuine empathy depends crucially on self-other awareness and on the ability to regulate one's own emotional state, allowing proper identification of the other's condition and freeing up resources for coping with another's distress in prosocial ways" (p. 1074).

Emotion Regulation

Without the ability to regulate one's emotions, one is at risk of becoming overwhelmed by them in a way that interferes with their ability to feel empathy towards

another, and even to accurately interpret others' feelings. To the extent that anxiously attached individuals have more trouble with emotion identification under some circumstances, it has been hypothesized that their greater tendency to be emotionally overwhelmed or dysregulated may be to blame. Because their social hypervigilance may result in greater emotion identification capacity, however, Fraley et al. (2006) envision a best-worlds scenario when he asserts that anxious individuals' "hypervigilance could be socially advantageous if harnessed or regulated in an adaptive fashion" (Fraley et al., 2006, p.1184).

As Decety and Jackson (2004) argue from their work in social cognitive neuroscience, the inability to regulate one's emotions "lead(s) to emotional contagion or emotional distress" (p.87) which interferes with the capacity for empathy. Similarly, Decety and Lamm (2009) assert, "It has been demonstrated that individuals who can regulate their emotions are more likely to experience empathy, and to interact in morally desirable ways with others. In contrast, people who experience their emotions intensely, especially negative emotions, are more prone to personal distress," which inhibits empathic ability (p. 12).

The developmental research has supported the link between emotion regulation and empathic ability. This research has shown that effortful control and self-regulation strongly relate to empathic concern in children (Rothbart et al., 1994). Conversely, children with greater emotional intensity and lower emotion regulation skills are inclined towards emotional overload and personal distress (Miller & Eisenberg, 1988), which inhibits their ability to think and act constructively towards others (Posner & Rothbart, 2000). Emotion regulation's promotion of empathic ability has also been found, more

specifically, with mentalizing (the specific empathic ability assessed in the present study with the Eyes Test). Self-control is a primary ingredient of emotion regulation, and developmental research has offered strong evidence that the development of mentalizing in children is linked to greater self-control, emerging around four years old (e.g., Carlson & Moses, 2001).

The link between emotion regulation and empathy has also been supported in experimental research with adults. Using a sample of 164 American undergraduate students, Eisenberg et al. (1994) explored the effects of emotionality and emotion regulation on empathy. The researchers assessed aspects of empathy using the IRI; emotion regulation using subsets of Grossenbacher et al.'s (1990) Physiological Reactivity Questionnaire and Roger and Najarian's (1989) Emotional Control Questionnaire; and emotional intensity with Larsen's Affect Intensity Measure (AIM; Larsen & Diener, 1987). They found that personal distress empathy (PDE, as measured by the IRI) was negatively correlated with all measures of emotion regulation. Given PDE's established effect on reducing empathic ability, this finding supports the link between emotion regulation and enhanced empathy. Similarly, regression analyses found that both high negative emotional intensity and low emotion regulation predicted PDE. Conversely, Perspective Taking, a cognitive form of empathic ability assessed on the IRI that relates to the inclination to take on the psychological point of view of others (e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective"), was repeatedly found to positively correlate with emotion regulation assessments and their subscales. Furthermore, once the effects of negative emotional intensity were controlled, Eisenberg et al. found a significant positive correlation between

emotion regulation and empathic concern, the IRI subscale most often associated with traditional notions of empathy (e.g., “I often have tender, concerned feelings for people less fortunate than me”). These studies’ findings support the argument that emotion regulation promotes empathic ability, while low or impaired emotion regulation inhibits it.

Rather than use a few different measurements to assess emotion regulation, as did Eisenberg et al., the present study assessed this ability using the Difficulties in Emotion Regulation—Short Form (DERS-SF; Kaufman et al., 2016), a measurement derived from the longer Difficulties in Emotion Regulation Scale (DERS), one of the most well regarded and widely used assessments of emotion dysregulation. The DERS-SF incorporates six subscales, including emotion regulation strategies, non-acceptance of emotions, emotional impulsivity, ability to accomplish goals when upset, emotional awareness, and emotional clarity. Developed from adolescent and adult samples totaling 1,054 participants, the DERS-SF at least meets if not exceeds the excellent psychometric properties of the DERS, and, with half the number of items, is less taxing for respondents to complete. The original DERS has been validated in a sample of 37 Australian therapist trainees, and found to have a Cronbach’s alpha of .91 (Finlay-Jones et al., 2016).

Self-Differentiation

Just as the ability to regulate one’s emotions can reduce emotional overload, so can the ability to differentiate between the self and the other, which accomplishes this goal by clarifying that it is the other that is in danger or distress, and not the self. This link has been asserted across psychology-related fields, from psychoanalytic theory to neuroscience research. Given the weaker interpersonal boundaries associated with

anxious attachment, this ability may furthermore hold particular significance for anxious individuals.

Psychoanalytic theorists have often asserted that interpersonal boundaries (another term for self-differentiation) is the most important factor in the ability to initiate the empathic process in therapy (e.g., Buechler, 2008; Ehrenberg, 1992). As early as 1940, Harry Stack Sullivan introduced his concept of the therapist as a “participant observer,” one who is both engaged in the relationship with the client, but also remains somewhat divorced from it, so as to more objectively assess the interaction and more accurately understand the client. In 1949, the psychoanalyst Theodor Reik proposed detachment as one of the four components of empathy, with detachment defined as “moving back from the merged inner relationship to a position of separate identity, which permits a response to be made that reflects both understanding of others as well as separateness from them” (Decety & Jackson, 2004, p. 74). It is significant for the purposes of the present study that Reik used accurate understanding of others as a definition of empathy, relevant to the task of the present study in which participants attempted to accurately understand or identify the emotional state of others based on their eye expression. Carl Rogers, the psychologist perhaps most known for his emphasis on the importance of empathy in psychotherapy, described empathy as perceiving "the client's private world as if it were your own, *but without ever losing the 'as if quality"* (Rogers, 1992, p. 829; emphasis added). More recently, Beuchler (2008, p. 38–39) emphasized that the empathic process depends on the therapist’s ability to join the client in their feelings, but to simultaneously maintain separateness, by both “feeling into” a client’s emotional experience, and “feeling out of” it.

Although the significance of self-differentiation for empathy is asserted throughout the relevant psychology and psychotherapy literature, the strongest empirical evidence for this case may come from neuroscience, as other psychology authors have noted. Several neuroscience studies have recently supported the strong link between self-differentiation and empathic capacity. As Decety and Lamm (2009) conclude, self-differentiation "is of particular importance when observing another's distress, because a complete merging with the target would lead to confusion as to who is experiencing the negative emotions and therefore to different motivations as to who should be the target of supportive behavior" (p. 8). There are multiple studies that demonstrate the empathic significance of self-differentiation using neuroimaging with subjects who are asked to look at images of others nonverbally expressing pain, and to either imagine that they themselves are experiencing pain or to exclusively focus on the other's pain ("imagine self" versus "imagine other") (Lamm et al., 2007). Repeatedly, the neuroimaging studies have found that the "imagine self" condition, or a blurring of who is the one experiencing pain, promotes personal distress, which is detrimental to empathy or the desire or ability to help the other. In contrast, being able to clearly identify that it is the other that is experiencing pain, and not the self, promotes empathic concern, which, in turn, promotes more accurate reading of others and prosocial behavior (Decety & Lamm, 2009).

One such study (Lamm et al., 2007) had 17 French participants between the ages of 18 and 31 years old watch videos of patients (actors) who they were told were undergoing painful medical treatment consisting of aversive auditory stimulation. Participants were split into two groups, and asked to either imagine that they are the one in pain, or to imagine the experience of the patient they are viewing. Responses were

assessed using both event-related fMRI and several empathy self-reports. In addition to the trait empathy measures, researchers used a procedure assessing state empathy, in which, after viewing the video clips, participants rated the extent to which they felt various emotions, including adjectives which research has associated with empathic concern (sympathetic, warm, compassionate), as well as those associated with personal distress (alarmed, upset, distressed).

Both the neural and behavioral findings supported assertions from previous research and theory about the factors promoting empathy. As hypothesized, participants in the "imagine other" condition demonstrated significantly greater empathic concern, while those in the "imagine self" condition demonstrated greater personal distress. These differences were also reflected neuropsychologically in participants' brain images. Again, imagining oneself to be in a painful or difficult situation elicits greater distress than imagining it is happening to someone else, thereby demanding greater concern for the self and use of resources which could have otherwise been empathically directed towards the other. Given these findings, Lamm et al. (2007) concluded that "a complete blurring of self and other would be detrimental and is not the purpose of empathy" (p. 54), and that, "In order for the subjective experience to be labeled empathy, the observer must recognize that the emotion she/he is experiencing is a response to the other's emotional state" (p. 56). In both cases, it is a separation between self and other that, for the reasons mentioned, helps promote the self's capacity for empathy.

More relevant to the present study's interest in emotion identification, empirical research has also demonstrated the more specific link between self-differentiation and social perception. Lawrence et al. (2006), for example, demonstrated that greater self-

differentiation promoted greater accuracy when participants had to choose one of two words that best represented the emotional state portrayed by an actor's gestures and expressions in short silent video clips, similar to participants in the present study choosing which word best represented the emotional state portrayed in the eye expressions on the Eyes Test. As with Lamm et al. (2007), Lawrence et al. also used fMRI imaging, an experimental task, and behavioral measures to explore their hypotheses. A sample of 12 participants completed the revised Profile of Non-Verbal Sensitivity (PONS-r; Rosenthal et al., 1979), which assesses social perception using two-second video clips of a female actor representing various emotional states using facial expressions, body language, and gestures. To assess social perception, participants were asked to choose which of two words most accurately represent the emotional state expressed by the actor. To assess self-other overlap or differentiation, participants were asked to choose trait adjectives from a list of 75 adjectives (FTrait Adjective Checklist; Loehlin & Nichols, 1976) that they believed best described themselves, as well as choose adjectives that they believed to best represent the actor in the video. From this, researchers calculated overlap scores to assess to what degree participants saw themselves and the actor as overlapping. Finally, participants also completed empathy self-reports.

As other researchers have concluded, Lawrence et al. (2006) found that personal distress activated the same brain region as strong self-other overlap, supporting the association of low self-differentiation with personal distress, an empathic impediment. Lawrence et al. (2006) also found that greater self-differentiation, as assessed by the ETrait Adjective Checklist, in addition to brain imaging data, predicted greater social

perception accuracy on the PONS-r. Such a finding is particularly relevant to the present study, as Lawrence et al.'s (2006) findings suggest that greater self-differentiation not only promotes empathic ability, but, more specifically, more accurate emotion recognition, as the present study explored with the Eyes Test.

As mentioned, although self-differentiation is crucial for empathy, it holds particular significance for anxiously attached individuals, given their generally weaker interpersonal boundaries (and, therefore, self-differentiation). As also previously mentioned, it has been theorized that it is these weaker boundaries that may inhibit accurate social perception among anxious individuals, making them more vulnerable to becoming overwhelmed and misreading social cues, or projecting their own emotion onto others. For this reason, the present study hypothesized that the potential emotion identification strengths associated with anxious attachment may be maximized among the subset of anxious therapists who have greater self-differentiation than their counterparts.

Although these studies used neuroimaging to assess self-differentiation, conducting fMRIs was beyond the scope of the present study. Instead, the present study used a psychometrically sound self-report measure, the Differentiation of Self Inventory–Short Form (DSI-SF; Drake et al., 2015). This measure is derived from the Differentiation of Self Inventory—Revised (DSI-R) (Skowron & Schmitt, 2003), the most widely used and validated assessment of differentiation of self (Sloan & Dierendonck, 2016).

To summarize, the present study proposes anxious attachment and SPS, with their relationships to both distress and empathy, as potential operationalizations of the wounded healer hypothesis, and explored whether they may help promote emotion-

identification, an empathic ability. Research has suggested some support for anxious attachment and SPS's promotion of emotional attunement, although, with anxious attachment, this ability may depend on the valence of the emotion. Given SPS's relationship to anxious attachment, the present study explored whether SPS may be a factor promoting emotional attunement in anxious therapists. The present study also used a therapist sample, as therapists may be better at accurate emotion identification than non-therapists. Finally, emotion identification accuracy is likely to be maximized by emotion regulation and self-differentiation, two variables shown to be critical for empathic capacity (e.g., Decety & Meyer, 2008). The moderation of anxious attachment and SPS by these variables may offer a "best-worlds" scenario. It allows for the anxious and sensitive individual's potential advantages in emotion identification, while limiting the distress-related interference that can be associated with these constructs.

CHAPTER III

Statement of the Problem

Decades of research have indicated that therapist empathy is the greatest predictor of good treatment outcomes (Wampold & Imel, 2015) and that distress can interfere with empathic capacity (Britton & Fuendeling, 2005; Mikulincer et al., 2005; Rubino et al., 2000). However, evidence has also suggested that some factors related to distress may actually promote empathic capacity. The concept of therapists as "wounded healers" who have cultivated empathic abilities from experiences of suffering (e.g., Wolgien & Coady, 1997), was presented as a conceptual framework in which to discuss the present study's variables and their relationship with both distress and empathy. In fact, research has found that about 74% of therapists have experienced suffering that in some way motivated their decision to become therapists (Barr, 2006), and that such experiences may enhance therapists' empathy and emotional attunement with clients (e.g., Hanshew, 1998; Wolgien & Coady, 1997; Zerubavel & Wright, 2012).

Anxious attachment is applicable to the wounded healer hypothesis. Although anxious attachment in therapists has been associated with poorer treatment outcomes (e.g., Eams & Roth, 2000; Parpottas & Draghi-Lorenz, 2015; Rubino et al., 2000), therapists with early relational trauma have also been found to be better attuned and responsive to others' trauma (e.g., Cohen, 2009), and may pay more attention to the therapeutic relationship (Marmarosh et al., 2014). Research has additionally suggested that anxious therapists feel particularly high levels of emotional empathy (Trusty et al., 2005) and may, under certain circumstances, show more accurate emotion identification than non-anxious individuals (Fraley et al., 2006; Hunefeldt et al., 2013; Meyer & Levy,

2009). In particular, the distress associated with the preoccupation with relationships may promote in anxious individuals “hyperactivating strategies,” or hypervigilance and responsiveness regarding others’ emotional states and availability, which may make them more practiced readers of others’ emotions.

Sensory processing sensitivity (SPS), a genetically determined trait characterized by greater emotional and physiological responsivity to sensory stimuli as well as deeper cognitive processing (Aron, 2018), may be linked to anxious attachment (Jerome & Liss, 2005; Levit-Binnun et al., 2014; Meredith et al., 2016; Meyer et al., 2005). Like anxious attachment, SPS also plays a role in the complex connection between distress and empathy. As with the preoccupation with relationships in anxious individuals, the sensitivities of highly sensitive people may make them both more susceptible to distress and more sensitive to the experience of others, an operationalization of the wounded healer phenomenon.

Supporting highly sensitive people’s susceptibility to distress, research has found neuroticism to be the personality characteristic most significantly related to SPS (Smolewska et al., 2006). A good example of the interaction between environment and temperament, these sensitivities in children may make them more needy and vulnerable, requiring more of their caregiver and increasing the likelihood that they develop an anxious attachment. Indeed, several studies have found a significant relationship between sensory sensitivity and anxious attachment (Jerome & Liss, 2005; Levit-Binnun et al., 2014; Meredith et al., 2016; Meyer et al., 2005). However, SPS has often been also associated with empathic ability. Highly sensitive people feel things more deeply, leading to greater reflection, and may have greater awareness of others and their moods, wants,

and needs (Aron & Aron, 1997; Aron, 2000). Given the empathic potential of SPS, as well as its relationship to anxious attachment, the present study explored whether SPS may be a factor contributing to emotional attunement in anxious individuals, a possible link research has not previously explored.

If anxious attachment and SPS can promote emotional attunement, this likelihood may be greater in therapists. As discussed, many therapists are wounded healers, compelled into the profession from an experience of suffering which may enhance their empathic ability with clients (e.g., Hanshew, 1998; Wolgien & Coady, 1997; Zerubavel & Wright, 2012). As wounded healers, therapists are furthermore more likely to have undergone their own personal therapy and benefitted from it (Norcross, 2005), which carries its own implications for enhanced emotion regulation and empathic capacity. Indeed, empirical research has suggested that therapists may be better at emotion regulation and distress tolerance than non-therapists (e.g., Hassenstab et al., 2007; O'Brien & Haaga, 2015), abilities essential for empathic capacity, and which may be particularly important for anxious and highly sensitive individuals. Given the nature of their work, therapists may also be more incentivized for emotional attunement and have greater opportunity for its cultivation. However, the relationship between anxious attachment and emotion identification has not been adequately studied in the therapist population, and SPS has not been studied in the therapist population at all.

Given the unique empathic potential of anxious attachment and SPS, the present study explored whether these variables may help promote more accurate emotion identification of others' expressions, an ability which research has tied to empathy (Besel & Yuille, 2010; Chikovani et al., 2015; Gery et al., 2009; Wai & Tiliopoulos, 2012). The

research exploring anxious attachment's relationship with emotion identification has been mixed, however. To assess emotion identification, the present study used the Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001), comprised of 36 black-and-white photographs showing only people's eyes and asking respondents to identify the emotion best represented in each pair of eyes. Several studies have explored the relationship between anxious attachment and emotion identification using the Eyes Test. However, like the broader literature exploring the relationship between anxious attachment and emotion identification, relevant research findings using this assessment have also been mixed.

Of the nine studies (eight of which were with non-therapists) found using the Eyes Test to explore the relationship between anxious attachment and emotion identification, two found a positive relationship, one found a negative relationship, and six found no significant relationship. Neither of the two studies finding a positive relationship found that anxious attachment was correlated more broadly with *all* emotion identification. Instead, one study (Hunefeldt et al., 2013) found that anxious attachment was related to more accurate identification of neutral and difficult-to-recognize expressions, and the other (Meyer & Levy, 2009) found that it was related to more accurate identification of negative expressions. As other researchers point out, it makes sense that anxious individuals would be more accurate in identifying negative and neutral valences. Anxious individuals may be particularly motivated to recognize these emotions in others as they are most likely to pose an interpersonal threat (Mikulincer & Shaver, 2003). For these reasons, the present study hypothesized that anxious attachment would be related to more accurate identification of negative and neutral valenced emotional

expressions, but not all emotional expressions (e.g., not positive valenced emotional expressions).

A likely factor in the discrepant findings of research exploring the relationship between anxious attachment and emotion identification is whether or not studies broke down the Eyes Test items by valence, and did not only assess overall emotion identification accuracy across Eyes Test items. This may explain why some studies exploring this relationship with the Eyes Test did not find a positive relationship, including the one study that found a negative relationship, and the three of the six studies finding no relationship, as these studies did not break down items by valence. Another factor that may have significantly influenced findings is how studies that did break down items categorized their valence. As Hudson et al. (2020) recently demonstrated, sample size (and its resulting sample error in estimates) significantly impacts how Eyes Test items are categorized. Given this information, it is helpful to consider that two of the three studies breaking down Eyes Test items by valence and finding no significant relationship used only a sample of 17 participants. In contrast, the present study used the most robust valence ratings to date, developed from a sample of 164 participants, the largest sample of Eyes Test item raters ever used (Hudson et al., 2020).

As previously mentioned, if anxious attachment does promote an emotional attunement in therapists, it is possible that SPS, with its unique empathic advantages, may help promote this relationship. Although fMRI research indicates that highly sensitive people (non-therapists) have greater activation in areas of the brain associated with empathy and cognitive processing upon looking at pictures of happy and sad faces (Acevedo et al., 2014), the relationship between SPS and emotion identification accuracy

has not been adequately explored; including with complex emotions, as in the Eyes Test. More broadly, no research has been done on highly sensitive therapists. The present study sought to address these gaps in the literature, in addition to exploring the role, if any, that SPS plays in the promotion of emotional attunement in anxious therapists.

Finally, research has indicated that the likelihood that anxious attachment and SPS promote accurate facial emotion identification would be maximized if moderated by two variables critical to the capacity for empathy: emotion regulation and self-differentiation (Decety & Meyer, 2008). Relevant emotion identification studies have not included these variables, despite the overwhelming evidence that they are central to diminishing the in-the-moment distress and emotional overload that can interfere with empathic ability (Decety & Meyer, 2008), including with social perception (Lawrence et al., 2006). The inclusion of these moderators in the present study can help assess the potential empathic advantages of anxious attachment and SPS, while limiting the empathy-interfering distress also associated with these constructs.

The present study explored whether therapists' anxious attachment positively predicted emotion identification accuracy with negative and neutral valences on the Eyes Test. After exploring whether SPS positively related to anxious attachment, replicating previous findings, it then used a moderated mediation model to explore whether SPS mediated the positive relationship between anxious attachment and emotion identification accuracy with negative and neutral valences, and whether this relationship was moderated by emotion regulation and self-differentiation. If SPS mediates this relationship, it would suggest that SPS is a factor contributing to emotional attunement in anxious therapists. Finally, if therapists' anxious attachment and SPS predicted more accurate emotion

identification, it may lead to new understandings of these constructs' associations with empathy, and of how they can be harnessed in the service of psychotherapeutic treatment.

Variable List

Independent Variables:

- **Anxious Attachment:** mean score of the Anxious Attachment subscale of the revised Experiences in Close Relationships scale (ECR-R; Fraley et al., 2000), measured continuously. (Hypotheses 1, 2, 3, and 4).
- **Personal Therapy:** number of weeks participants report having been in therapy themselves, measured continuously. (Exploratory Questions 1, 2, and 3).

Proposed Mediator Variable:

- **Sensory Processing Sensitivity (SPS):** mean score of the Highly Sensitive Person Scale (HSPS; Aron & Aron, 1997), measured continuously. (Hypotheses 3 and 4).

Proposed Moderator Variables:

- **Emotion Regulation:** mean score of the Difficulties in Emotion Regulation—Short Form (DERS-SF; Kaufman et al., 2016), measured continuously. (Hypothesis 4).
- **Self-Differentiation:** mean score of the Differentiation of Self Inventory–Short Form (DSI-SF; Drake et al., 2015), measured continuously. (Hypothesis 4).

Dependent Variables:

- **Sensory Processing Sensitivity (SPS):** mean score of the Highly Sensitive Person Scale (HSPS; Aron & Aron, 1997), measured continuously. (Hypothesis 1).

- **Emotion Identification Accuracy (Negative and Neutral Valence):** percentage of negative and neutral-valenced items correctly identified on the Revised Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001), measured continuously. (Hypotheses 2, 3, and 4).
- **Emotion Regulation:** mean score of the Difficulties in Emotion Regulation—Short Form (DERS-SF; Kaufman et al., 2016), measured continuously. (Exploratory Question 1).
- **Self-Differentiation:** mean score of the Differentiation of Self Inventory–Short Form (DSI-SF; Drake et al., 2015), measured continuously. (Exploratory Question 2).
- **Emotion Identification Accuracy (Overall):** percentage of items correctly identified on the Revised Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001), measured continuously. (Exploratory Question 3).

Proposed Covariates:

- **Neuroticism:** mean score from three questions designed by researchers to assess and control for neuroticism when using the Highly Sensitive Person Scale (HSPS; Aron & Aron, 1997). This variable was measured continuously.
- **Avoidant Attachment:** mean score from the Avoidant Attachment subscale of the revised Experiences in Close Relationships scale (ECR-R; Fraley, et al., 2000), measured continuously. This variable was used as a covariate to isolate the unique effects of the anxious aspects (as opposed to the avoidant aspects) of insecure attachment.

Hypotheses

1. There will be a significant positive relationship between anxious attachment and SPS, replicating previous findings (see path *a* in Figure 1).

2. There will be a significant positive relationship between anxious attachment and emotion identification accuracy in negative and neutral valences on the Eyes Test (see path *c'* in Figure 1).

3. SPS will mediate the positive relationship between anxious attachment and emotion identification accuracy in negative and neutral valences, strengthening this positive effect.

4. SPS's mediation effect on the positive relationship between anxious attachment and emotion identification accuracy in negative and neutral valences will be moderated by both emotion regulation and self-differentiation, with each strengthening this positive indirect effect. In addition:

    a. Emotion regulation will moderate the relationship between i) anxious attachment and emotion identification, such that greater emotion regulation will strengthen the positive relationship between anxious attachment and emotion identification (see path *d* in Figure 1); and ii) SPS and emotion identification, such that greater emotion regulation will strengthen the positive relationship between SPS and emotion identification (see path *e* in Figure 1).

    b. Self-differentiation will moderate the relationship between i) anxious attachment and emotion identification, such that greater self-differentiation will strengthen the positive relationship between anxious attachment and emotion identification (see path *f* in Figure 1); and ii) SPS and emotion identification, such that

greater self-differentiation will strengthen the positive relationship between SPS and emotion identification (see path *g* in Figure 1).

See Figure 1 for the moderated mediation model.

Exploratory Questions

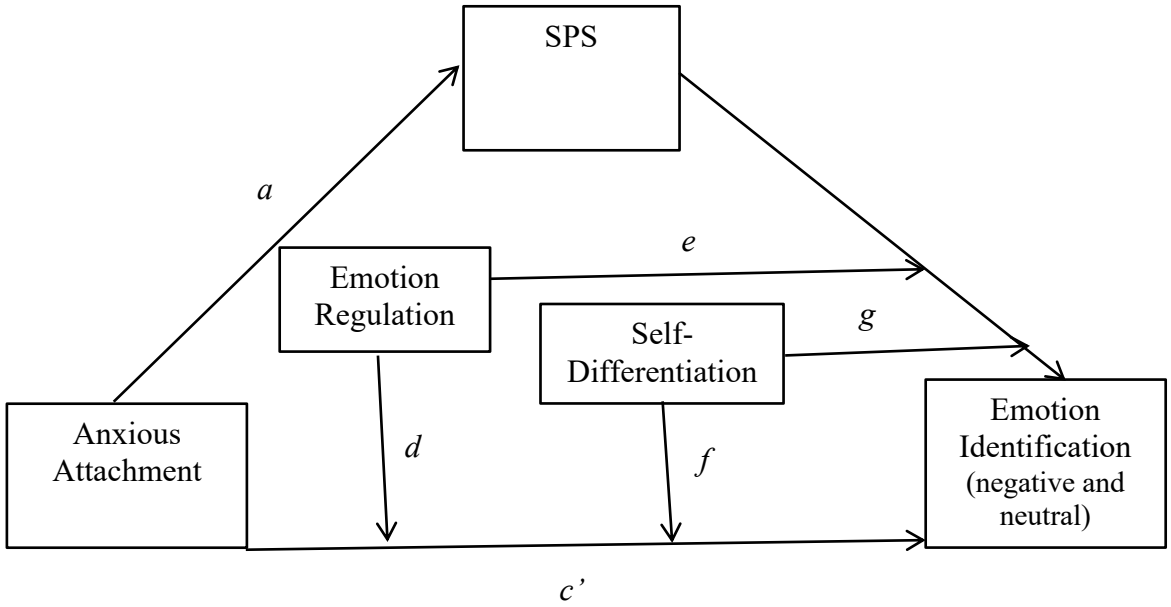
1. What is the relationship between amount of personal therapy and emotion regulation?

2. What is the relationship between amount of personal therapy and self-differentiation?

3. What is the relationship between amount of personal therapy and overall emotion identification accuracy, as assessed on the Eyes Test?

Figure 1

Moderated Mediation Model



CHAPTER IV

Method

Participants

A G* Power analysis for the proposed model originally suggested a sample size of 129. This number was proposed given four predictor variables, and with the default settings of 0.15 for Effect Size, .05 for Alpha, and .95 for Power.

Participants working in a psychotherapeutic capacity, including psychologists, counselors, and student therapists, were sought for this study. To meet criteria, participants must have been conducting psychotherapeutic work with at least one patient; and have, or be in the process of completing, a relevant master's or doctorate degree. A total of 283 therapists participated in the study. However, 54 participants who did not complete any of the study measures (completing only the Demographics Questionnaire or less) were removed, and an additional 3 participants were removed due to duplicate IP addresses (see the Results section for further discussion regarding the handling of missing or problematic data). The resulting sample size was 226, well exceeding the *N* of 129 originally sought.

The demographics of the study sample are represented in Table 1.

Measures

Personal Therapy

In the Demographics Questionnaire, participants were asked to enter (fill in the blank) the number of weeks they themselves have undergone psychotherapy. Scores were measured continuously.

Table 1

Demographic Characteristics of Sample (N = 226)

Characteristic	*M (SD)*
Age	31.09 (8.59)
Experience[a] (in months)	47.55 (73.72)
Therapy[b] (in weeks)	105.61 (186.10)
	%(*n*)
Gender	
Female	86.7%
Male	12.8%
Transgender/Non-Binary	0.4%
Race	
White	75.7%
Hispanic/Latinx	8.8%
Asian	7.5%
Mixed Race	3.1%
Black/African A.	2.2%
Other	2.2%
Prefer Not to Respond	0.4%
Clinical Field	
Clinical Psychology	62.4%
Counseling	22.6%
School Psychology	8.0%
Counseling Psychology	2.7%
Other	2.7%
Social Work	1.3%
Marriage & Family Th.	0.4%

Note. *M* = mean; *SD* = standard deviation. Experience = number of months practicing therapy with at least one client. African A. = African American. Marriage & Family Th. = Marriage and Family Therapy. [a]One participant did not respond to this question. [b]Two participants did not respond to this question.

Anxious Attachment

Anxious attachment was measured using the Anxious Attachment subscale of the revised Experiences in Close Relationships scale (ECR-R; Fraley, et al., 2000) (see Appendix D). ECR-R is a self-report measure assessing one's levels of both anxious and avoidant attachment. It includes 18 items for each dimension, for a total of 36 items, rated on a 7-point Likert scale, ranging from Strongly Disagree to Strongly Agree. A representative item from the Anxious dimension is, "I'm afraid that I will lose my partner's love." Mean scores were used, with higher scores indicating greater anxious attachment. Scores were measured continuously.

The ECR-R was created from the analysis of data from 1,085 people, and 20 of its 36 items come from the original ECR. Although the ECR-R is considered to have better psychometric properties than the ECR, it may have lower reliability at the secure pole of both dimensions than the insecure pole (Fraley et al., 2000). However, in their 2004 study with undergraduate students, 197 of whom completed the ECR-R at time 1 and 199 who completed it at time 2 (142 of these students participated both times), Sibley and Liu concluded that, "The ECR-R displayed a clear two factor structure and provided reliable and replicable measures of both the attachment anxiety and avoidance subscales" (p. 973). Internal consistency reliability tends to be about .90 or above for both dimensions of the scale.

The ECR-R has been used with therapist samples. In his 2004 dissertation study, Nigro used the ECR-R with 588 members of the Canadian Register of Health Service Providers in Psychology (CRHSPP), a group of practicing psychologists. In the present

sample (N = 226), Cronbach's alpha for the Anxious Attachment subscale was .96, indicating excellent internal consistency.

Avoidant Attachment

Avoidant attachment was assessed using the Avoidant Attachment subscale of the revised Experiences in Close Relationships scale (ECR-R; Fraley, et al., 2000), which includes 18 items rated on a 7-point Likert scale. Mean scores were used, with higher scores indicating greater avoidant attachment. Scores were measured continuously. Cronbach's alpha for the Avoidant Attachment subscale in the present sample (N = 226) was .96, indicating excellent internal consistency.

Sensory Processing Sensitivity

SPS was measured using the Highly Sensitive Person Scale (HSPS; Aron & Aron, 1997) (see Appendix C). The scale includes 27 items scored on a 7-point Likert scale, ranging from Not at All to Extremely. Representative items include, "Are you easily overwhelmed by strong sensory input?" "Do you get rattled when you have a lot to do in a short amount of time?" and "Are you deeply moved by the arts or music?" Mean scores were used, with higher scores indicating greater SPS. Scores were measured continuously.

Studies have shown the HSPS to have good content and convergent validity (Aron & Aron, 1997; Smolewska et al., 2006). Using a sample of 380 University of Waterloo students, Smolewska et al. (2006) found a Cronbach's alpha of .89 for the HSPS. As this scale has not been used with a therapist sample, a pilot study was first conducted with therapists to assess its reliable use with this population. Using a pilot sample of 10 therapists (9 of whom were student therapists), a Cronbach's alpha of .91 was found,

indicating excellent internal reliability. In the full sample of the present study ($N = 226$), Cronbach's alpha for the HSPS was .89, indicating good internal consistency.

Neuroticism

Previous research has shown significant correlations between the HSPS measure and measures of negative affectivity, including neuroticism (HSPS; Aron & Aron, 1997). Because of these findings, the developers of the HSPS control for neuroticism and suggest all studies take a similar approach for all models using the HSPS measure, regardless of whether it is an outcome variable or not. Based on these recommendations, the present study used the same measure of neuroticism that the HSPS developers proposed for all models involving the HSPS measure.

The developers of the HSPS (HSPS; Aron & Aron, 1997) suggest using three questions to assess for neuroticism: "Are you a tense or worried person by nature?" "Are you prone to depression?" and "Are you prone to fears?" The items are scored on a 7-point Likert scale, ranging from Not at All to Extremely. Mean scores were used with higher scores indicating greater neuroticism. Scores were measured continuously. Cronbach's alpha for the Neuroticism scale in the present sample ($N = 226$) was .79, indicating acceptable internal consistency.

Emotion Regulation

Emotion regulation was measured using the Difficulties in Emotion Regulation—Short Form (DERS-SF; Kaufman et al., 2016), derived from the longer DERS, one of the most widely used assessments of emotion dysregulation. The DERS-SF incorporates six subscales, including emotion regulation strategies, non-acceptance of emotions, emotional impulsivity, ability to accomplish goals when upset, emotional awareness, and

emotional clarity. It is scored on a 5-point Likert scale ranging from Almost Never to Almost Always. Mean scores were used, with higher scores indicating greater difficulty in emotion regulation. Scores were measured continuously.

Development of the DERS-SF was based on three adolescent ($N = 257$) and two adult samples ($N = 797$), and has been found to have good validity and reliability, with a Cronbach's alpha of .89 in a sample of 797 college students (Kaufman et al., 2016). Although the short form has not been validated in a therapist sample, the original DERS has been validated in a sample of 37 Australian therapist trainees, and found to have a Cronbach's alpha of .91 (Finlay-Jones et al., 2016). In the present sample ($N = 226$), Cronbach's alpha was .90, indicating excellent internal consistency.

Self-Differentiation

Self-differentiation was measured using The Differentiation of Self Inventory–Short Form (DSI-SF; Drake et al., 2015), a 20-item self report. This measurement is derived from the Differentiation of Self Inventory—Revised (DSI-R) (Skowron & Schmitt, 2003), likely the most widely used and validated assessment of differentiation of self (Sloan & Dierendonck, 2016). The test reflects the interpersonal and intrapersonal dimensions of Bowen's differentiation of self, a centerpiece of his family systems theory (Jankowski & Hooper, 2012; Kerr & Bowen, 1988; Skowron et al., 2003). The interpersonal dimension assesses respondents' ability to balance intimacy and independence in relationships, while the intrapersonal dimension assesses the related balance of cognition and emotion, therefore assessing respondents' affect management. Scientific evidence has supported these two dimensions of differentiation of self (Jankowski & Hooper, 2012). The two dimensions are represented in the test's four

subscales: emotional cutoff (EC), emotional reactivity (ER), fusion with others (FO), and I-position (IP). Sample items include, “I’m fairly self-accepting,” and “I tend to distance myself when people get too close to me.” The test uses a 6-point Likert scale, ranging from Not at All True of Me to Very True of Me. Mean scores were used with higher values indicating greater differentiation of self. Scores were measured continuously.

The sample from which the DSI-SF was developed was comprised of 355 undergraduates, mainly Caucasian (73%) and female (55%) (Drake et al., 2015). Convergent validity was evidenced by a positive relationship between the DSI-SF and the Level of Differentiation of Self Scale (Drake et al., 2015). Additionally, the DSI-SF has been shown to negatively relate to symptoms of depression, anxiety, and stress (Drake et al., 2015). Recently, the DSI-SF was validated in a sample of 262 therapists and found to have a Cronbach’s alpha of .88 (Connery & Murdock, 2019). In the present sample (N = 226), Cronbach’s alpha was .91, indicating excellent internal consistency.

Emotion Identification

Emotion identification was measured using the revised Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001) (see Appendix B for sample item). The Eyes Test is comprised of 36 black-and-white photographs showing only various people’s eyes, and asks responders to choose from a list of four adjectives the emotional expression most accurately represented in each pair of eyes. According to the developers of the measure, the Eyes Test was designed to assess “how well the participant can put themselves into the mind of the other person, and ‘tune in’ to their mental state” (Baron-Cohen et al., 2001, p. 241). For this reason, they refer to it as “an advanced theory of mind test,” a concept they say “overlaps with the term ‘empathy’” (Baron-Cohen et al.,

2001, p. 241). Scores were calculated as the percentage of items correctly identified, with higher scores indicating greater emotion identification accuracy. Scores were measured continuously. For the present study's main analyses, Eyes Test items were broken down by valence to assess whether anxious and/or highly sensitive therapists show greater emotion identification accuracy with negative and neutral valences than less anxious and/or highly sensitive therapists.

Internal Consistency Considerations. The Eyes Test has been validated with therapist samples, however internal consistency numbers were not reported (Hassenstab et al., 2007; Lawrence et al., 2004). Although the Eyes Test demonstrated good internal consistency (α = .77) in a non-therapist sample of adults (Prevost et al., 2014), internal consistency numbers are often not reported for the Eyes Test for a variety of reasons. As Fernandez-Abascal et al. (2013) reported, the measure's psychometric properties complicate Cronbach' s alpha calculations. Another study (Olderbak et al., 2015) gives a fuller explanation, arguing that the measure has several attributes that may lower internal consistency numbers, including, for example, variability in the vocabulary difficulty of the response item words; a lack of standardization in the pictures (angles of face, light and shadow); its length, which, at 36 items, may disadvantage its internal consistency numbers; and that the measure may not be so homogenous, measuring, for example, different kinds of emotional expression. Similarly, Hall (2001) states that "the standard psychometric model…may not be applicable to nonverbal sensitivity tests," and, in relation to Olderbak et al.'s point regarding homogeneity, argues that, unlike other kinds of tests, nonverbal sensitivity tests may actually accrue validity by having items assessing different but related abilities. For these reasons, internal consistency numbers were not

reported here for the Eyes Test. Although the rest-retest reliability of the Eyes Test is an appropriate and potentially helpful psychometric, calculating it was unfortunately beyond the scope of the present study.

Emotional Valence Categorization of the RMET. To address the hypothesis that anxious attachment would be positively related to emotion identification accuracy of negative and neutral valences, the present study used the valence ratings recently published by Hudson et al. (2020). Hudson et al.'s valence ratings are based on a sample of 164 Canadian undergraduate students, who rated the Eyes Test items based on both the photograph and the correct emotional state response. Participants rated the items on a 7-point Likert scale, with 1 being "very negative," 4 being "neutral," and 7 being "very positive."

Although Hudson et al. found support for treating item valence continuously, the already complicated hypothesized models in the present study prohibited the emotion identification accuracy variable from being defined in this way. However, the Hudson et al. valence ratings are the most robust valence ratings of the Eyes Test items to date. The researchers published these ratings based on the largest sample size that has been used to categorize Eyes Test items by emotional valence, a meaningful distinction given that Hudson et al. found that sample size (and the resulting sample error in estimates) significantly impacts how items are categorized. The demographics of Hudson et al.'s sample further endorse its use for the present study: similar to the sample demographics of the present study, Hudson et al.'s sample was also mostly female and White.

In order to limit problems associated with categorizing the Eyes Test items, negative and neutral items were combined into one group rather than being categorized

separately. This method was deemed appropriate given that the present study did not differentiate between these two valences, hypothesizing that anxious attachment would positively relate to emotion identification accuracy with both valences. Importantly, however, there are several statistical reasons for combining negative and neutral valences. Combining these valences limits more arbitrary delineations of an item as negative or neutral (as the difference in mean ratings assigning an item to one valence category rather than an another is in some cases small), and maximizes the number of items used, allowing for more reliable scores which are less impacted by small deviations in performance. Using this combined group furthermore allowed the present study to differentiate the relevant items as much as possible from items in the positive valence category. The present study included in this combined group all Eyes Test items whose confidence interval upper limit was below a ranking of five, which was one number above "neutral" in the 7-point Likert scale Hudson et al. used. To the researcher's knowledge, this is the first time this valence categorization system using Hudson et al.'s (2020) findings has been used. For more information on the Eyes Test items used in the present study's grouping of negative and neutral valences, see Table 2.

Procedure

Trainee therapists, who represented the majority of the sample, were recruited by emails to directors at various university training programs (clinical, counseling, and school psychology) nationally, training directors at various postdoctoral and internship sites nationally, and through personal contacts. An ad was also placed in the online forum of the Student Doctor Network (www.studentdoctor.net). Non-trainee therapists were

Table 2

Eyes Test Items Used in Negative and Neutral Valence Grouping

Item	Emotion	Mean
15	Contemplative	4.65
1	Playful	4.63
13	Anticipating	4.63
29	Reflective	4.59
19	Tentative	4.24
27	Cautious	4.20
9	Preoccupied	4.13
36	Suspicious	4.09
24	Pensive	4.04
33	Concerned	3.94
22	Preoccupied	3.88
35	Nervous	3.87
12	Skeptical	3.80
32	Serious	3.70
34	Distrustful	3.68
10	Cautious	3.62
4	Insisting	3.60
14	Accusing	3.52
23	Defiant	3.45
7	Uneasy	3.37
11	Regretful	3.32
5	Worried	3.28
17	Doubtful	3.24
8	Despondent	3.10
2	Upset	2.76
26	Hostile	2.72

Note. This valence categorization system combines negative and neutral Eyes Test items into one grouping, and is based on the findings of Hudson et al. (2020). The sample used consisted of 164 Canadian undergraduate students, who rated the items on a 7-point Likert-type scale, with 1 being "very negative," 4 being "neutral," and 7 being "very positive." Only Eyes Test items whose confidence interval upper limit was below a ranking of five were included in this grouping. From left to right, the table identifies the item number, its correct response on the Eyes Test, and the mean valence rating.

recruited through the listserv for the Society for Psychotherapy Research, and through personal contacts. Participants who completed the entire protocol were eligible for one of six $50 Amazon gift cards, if they indicated interest in participating in the raffle and provided their email address. Participants gave their consent and completed all measures independently online (through Qualtrics). A raffle drawing was held after completion of the study, and gift cards were sent to the 6 winners.

Participants first read a consent form (see Appendix A) which introduced the study and the researcher involved, indicated that participation would take approximately 15-25 minutes, confirmed and outlined the study's commitment to confidentiality, and provided relevant names and contact information should participants have any questions or concerns. Participants then completed a demographics questionnaire, and were excluded from the study if they did not endorse the two required criteria: that they are currently conducting psychotherapeutic work with at least one patient; and have, or are in the process of completing, a relevant master's or doctorate degree. In addition to the inclusion criteria, the demographics questionnaire gathered information related to participants' gender identity, age, race, field of practice, and length of time in personal therapy. Participants then completed the Eyes Test to assess emotion identification accuracy, the Neuroticism Questionnaire to assess neuroticism, the HSPS to assess sensory processing sensitivity, the ECR-R to assess level of anxious attachment, the DERS-SF to assess emotion regulation, and the DSI-SF to assess self-differentiation. They were finally presented with a debriefing form, which included mental health resources in the case they had an emotional response to protocol content, as well as included the researcher's contact information. After completion of the study, the

researcher used a random number generator to identify 6 winners from the pool of 226 participants who completed the study protocol. These 6 winners were contacted and each were sent $50 Amazon gift cards.

CHAPTER V

Results

This chapter first presents an overview of what was done for data cleaning and analyses, before presenting the findings from preliminary analyses and hypotheses testing. The latter included four hypotheses and three exploratory questions.

Overview of Data Cleaning and Analyses

As discussed below, after data collection, data were screened for missing values, duplicate IP addresses, and signs of inattentive responding. The distribution of scores for each measure was tested for normality. Adequate internal consistencies were tested for all measures. Correlational analyses were then run to identify potential covariates. For Hypothesis 1, regression analyses were conducted to confirm a significant, positive relationship between anxious attachment and SPS, while controlling for neuroticism and avoidant attachment. For Hypothesis 2, regression analyses were conducted to assess whether anxious attachment predicted emotion identification accuracy in negative and neutral valences on the Eyes Test, while controlling for avoidant attachment. For Hypothesis 3, Hayes' PROCESS Macro for SPSS, Model 4 (Hayes, 2018), was used to assess whether SPS mediates the relationship between anxious attachment and emotion identification accuracy in negative and neutral valences. The effects of neuroticism and avoidant attachment were controlled. Results were bootstrapped for 5,000 samples, with 95% confidence intervals. Finally, for Hypothesis 4, Hayes' PROCESS Macro Model 17 (Hayes, 2018), was used to assess whether emotion regulation and self-differentiation moderated this mediation model, and whether there were any simple moderation effects. Again, the effects of neuroticism and avoidant attachment were controlled, and results

were bootstrapped for 5,000 samples. Analyses for exploratory questions involved conducting Spearman's rho correlations to assess the relationships between personal therapy and emotion regulation, self-differentiation, and emotion identification accuracy on the Eyes Test.

Preliminary Analyses

Exclusionary Criteria

As specified earlier, participants were automatically prevented from completing the study protocol if they did not meet inclusion criteria. After data collection, screenings were conducted for missing data, duplicate IP addresses, and signs of inattentive responding. Regarding IP addresses, three pairs of duplicate IP addresses were found, and, for each, the protocol pertaining to the chronological second of the pairs was excluded from analyses. This resulted in 3 participants being removed from data analyses due to a duplicate IP address.

Regarding inattention, several different screenings were used, including screening for participants who responded similarly across opposing items (psychometric antonyms), participants who responded dissimilarly across similar items (psychometric synonyms), and participants who gave the same response to all items (longstring). Particular attention regarding possible inattention was given to those participants whose protocol completion time was in the fastest 5% of all study participants. However, no compelling evidence suggesting clear inattentive responding emerged from these screenings, and therefore no participants were excluded for this reason.

Missing Data. Of the 283 people who participated in the present study, 54 participants were excluded for not completing any of the study measures (completing

only the Demographics Questionnaire or less). This removal left a sample size of 229. The final sample size after the removal of the 54 participants who did not complete most of the protocol, and the removal of 3 participants who had duplicate IP addresses, as discussed in the Exclusionary Criteria section above, was 226, well exceeding the sample size of 129 originally sought after the G* Power analysis. While 3 of the 226 remaining participants did not complete the entire protocol (1 participant did not complete two of the study measures [DERS and DSI], and 2 participants did not complete one of the study measures [DSI]), these participants were included in the analyses involving the measures they did complete.

Descriptive Statistics

Descriptive statistics of the study's measures are displayed in Table 3. Although some data were not normally distributed, the bootstrapping methods used in the main analyses did not require normal distribution. Therefore, these distributions were considered sufficient for the current study's analyses.

The scores of the current sample on the various measures were mostly comparable to those found in the general population, with perhaps one possible exception. It may be notable that the self-reported anxious attachment scores from the ECR-R in the current sample were one standard deviation lower than "norms" published from a large general population sample (Fraley, 2005). The mean score for the anxious attachment subscale of the ECR-R (Fraley et al., 2000) in the current sample was 2.68 (*SD* = 1.15), compared with a mean score of 3.56 (*SD* = 1.12) in a sample of over 17,000 people from the general population who completed the ECR-R online in the early 2000s (Fraley, 2005).

Table 3

Descriptive Statistics of Measures

Measure	Observed Min and Max Values	Possible Min and Max Values	Mean (*SD*)	Skew (*SE*)	Kurtosis (*SE*)
RMET (*N* = 226)	.33 – .94	.00 – 1.00	.77 (.10)	-.93 (.16)	1.91 (.32)
RMET: Negative and Neutral (*N* = 226)	.23 – 1.00	.00 – 1.00	.76 (.11)	-.91 (.16)	2.02 (.32)
RMET: Positive (*N* = 226)	.30 – 1.00	.00 – 1.00	.77 (.16)	-.82 (.16)	.48 (.32)
HSPS (*N* = 226)	2.11 – 6.30	1.00 – 7.00	4.29 (.80)	.03 (.16)	-.22 (.32)
Neuroticism (*N* = 226)	1.00 – 7.00	1.00 – 7.00	3.85 (1.27)	-.10 (.16)	-.43 (.32)
ECR: Anxious (*N* = 226)	1.00 – 5.83	1.00 – 7.00	2.68 (1.15)	.50 (.16)	-.74 (.32)
ECR: Avoidant (*N* = 226)	1.00 – 5.78	1.00 – 7.00	2.63 (1.18)	.67 (.16)	-.42 (.32)
DERS (*N* = 225)	1.06 – 4.17	1.00 – 5.00	1.98 (.55)	1.22 (.16)	1.93 (.32)
DSI (*N* = 223)	1.60 – 5.70	1.00 – 6.00	4.09 (.85)	-.48 (.16)	-.14 (.32)

Note. *SD* = standard deviation; *SE* = standard error; RMET = Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001); HSPS = Highly Sensitive Person Scale (Aron & Aron, 1997); ECR: Anxious Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); ECR: Avoidant= Avoidant Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); DERS = Difficulties in Emotion Regulation Scale (DERS-SF; Kaufman et al., 2016); DSI = Differentiation of Self Inventory (DSI-SF; Drake et al., 2015).

Covariates

Pearson and Spearman correlation analyses were conducted to determine whether there were signification correlations between the prospective covariates and the outcome variables. Neither of the two prospective covariates, neuroticism and avoidant attachment, were significantly correlated with the dependent variable of the present study's main model (Hypotheses 3 and 4), emotion identification accuracy in negative and neutral emotional valences, r (224) = .05, p = .46; r_s (224) = .04, p = .57. (For greater simplicity, emotion identification accuracy in negative and neutral valences will from here forth be referred to as EINNV). The effect sizes of these two correlations were, furthermore, very small. However, as expected, and replicating previous findings, neuroticism was significantly correlated with SPS, as measured by the HSPS, r (224) = .53, p <.01. Given this significant correlation with a large effect size, and the recommendation of the authors of the HSPS to control for neuroticism when conducting research using the HSPS (as stated in the Method section), neuroticism was used as a covariate in all hypotheses involving the HSPS (Hypotheses 1, 3, and 4).

Similarly, although avoidant attachment was not significantly correlated with the dependent variable of the main model, EINNV, the present study did find a significant correlation between avoidant attachment and anxious attachment, r_s (224) = .67, p <.001. Due to this significant relationship with a large effect size, avoidant attachment was used as a covariate with all analyses involving anxious attachment (Hypotheses 1-4) in order to isolate the unique effects of the anxious aspects of insecure attachment, and to conclusively rule out the possibility that avoidant attachment contributed to the relevant findings. In addition, avoidant attachment was significantly correlated with SPS, the

mediator, and therefore an outcome variable, in Hypotheses 3 and 4's models. This relationship, r_s (224) = .25, p <.01, with a small effect size, provided another reason to use avoidant attachment as a covariate in these hypotheses representing the main analyses of the present study.

Inter-variable Correlations

Correlation analyses involving the study's main variables are presented in Table 4.

Main Analyses

Hypothesis 1

Hypothesis 1 predicted a positive relationship between anxious attachment and SPS, replicating previous findings. The current study assessed this relationship while controlling for neuroticism and avoidant attachment. The overall ANOVA was significant, $F(3, 222) = 35.37$, p <.001, Adj. R^2 = .31 (see Table 5). Anxious attachment was a significant predictor, with a large effect size. Greater anxious attachment was independently associated with higher scores on the HSPS**.**

Hypothesis 2

Hypothesis 2 predicted a positive relationship between anxious attachment and EINNV, controlling for avoidant attachment. The overall ANOVA was not significant, $F(2, 223) = 0.05$, p = .95, and had a small effect size, Adj. R^2 = -.01 (see Table 6). Anxious attachment was not a significant predictor. Thus, greater anxious attachment did not affect EINNV and this hypothesis was not supported.

Table 4

Correlation Matrix for Main Study Variables

Measure	RMET: Negative and Neutral	HSPS	ECR: Anxious	DERS	DSI
RMET: Negative and Neutral		.08 [a]	.02	.02	-.10
HSPS			.40**	.42**	-.50**
ECR: Anxious				.50**	-.59**
DERS					-.73**

Note. RMET = Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001); HSPS = Highly Sensitive Person Scale (Aron & Aron, 1997); ECR: Anxious = Anxious Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); ECR: Avoidant= Avoidant Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); DERS = Difficulties in Emotion Regulation Scale (DERS-SF; Kaufman et al., 2016); DSI = Differentiation of Self Inventory (DSI-SF; Drake et al., 2015). [a]Pearson correlations. Correlations unmarked with an [a] are Spearman's rho. *N* ranges from 223-226 due to missing data. ***p* < .01.

Table 5

Bootstrap Estimates of Anxious Attachment Predicting SPS

	b	*SE*	*β* [a]	*t* [a]	*p*	95% CI
Neuroticism	0.27	0.04	0.43	6.86	<.001	[0.19, 0.35]
ECR: Avoidant	-0.40	0.06	-0.06	-0.80	.48	[-0.15, 0.07]
ECR: Anxious	0.18	0.06	0.25	3.26	.01	[0.06, 0.30]

Note. SPS = Sensory Processing Sensitivity (as assessed by the HSPS [Aron & Aron, 1997]); ECR: Anxious = Anxious Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); ECR: Avoidant= Avoidant Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); CI = confidence interval; *N* = 226. Bootstrap results are based on 1000 bootstrap samples. [a]These numbers are not based on bootstrapping.

Table 6

Bootstrap Estimates of Anxious Attachment Predicting EINNV

	b	*SE*	*β* [a]	*t* [a]	*p*	95% CI
ECR: Avoidant	0.00	0.01	0.02	0.25	.80	[-0.02, 0.02]
ECR: Anxious	0.00	0.01	-0.03	-0.32	.77	[-0.02, 0.02]

Note. EINNV = emotion identification accuracy in negative and neutral valences (as assessed by the RMET [Baron-Cohen et al., 2001]); ECR: Avoidant = Avoidant Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); ECR: Anxious = Anxious Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); CI = confidence interval; $N = 225$. Bootstrap results are based on 1000 bootstrap samples. [a]These numbers are not based on bootstrapping.

Hypothesis 3

Hypothesis 3 predicted that SPS will mediate the positive relationship between anxious attachment and EINNV on the Eyes Test, strengthening this relationship. Despite analyses for Hypothesis 2 indicating that anxious attachment is not a significant predictor of EINNV, Hypothesis 3 was nevertheless tested given the broad consensus that a total effect between two variables is not a prerequisite for indirect effects between those variables (Hayes, 2017). This hypothesis was tested by estimating a mediation model (Model 4) with Hayes' PROCESS Macro (version 3.5.2) on SPSS (version 26). Anxious attachment was the independent variable, SPS was the mediator, and EINNV was the dependent variable. The effects of neuroticism and avoidant attachment were controlled by entering these variables as covariates. Results were bootstrapped for 5,000 samples. The overall model was not significant, $F(4, 221) = 1.44$, $p = .22$, indicating that SPS did not mediate the relationship between anxious attachment and EINNV. The mediation hypothesis was therefore not supported. The overall model had a small effect size, $R^2 = .02$. Cohen's F^2, furthermore, was .02, indicating that the effect of all independent variables on EINNV was also small. Bootstrap coefficient results are presented in Table 7.

Hypothesis 4

Hypothesis 4 predicted that emotion regulation and self-differentiation would moderate this mediation model, strengthening the indirect effect between anxious attachment and EINNV. In addition, it predicted simple moderation effects, with emotion regulation (4a) and self-differentiation (4b) each moderating both, the i) relationship between anxious attachment and EINNV, and ii) the relationship between SPS and EINNV, such that greater emotion regulation and self-differentiation would each

Table 7

Bootstrap Regression Results from Testing the Simple Mediation Model

Predictors	On HSPS				On RMET: Negative and Neutral			
	b	*SE*	*p*	95% CI	*b*	*SE*	*p*	95% CI
Neuroticism	0.27*	0.04		[0.19, 0.35]	-0.01	0.01		[-0.02, 0.00]
ECR: Avoidant	-0.04	0.06		[-0.15, 0.07]	0.00	0.01		[-0.01, 0.02]
ECR: Anxious	0.18*	0.06		[0.05, 0.30]	-0.004	0.01		[-0.02, 0.01]
HSPS					0.02*	0.01		[0.00[a], 0.04]
R^2	.32		<.001		.02		.22	
F	35.62				1.44			

Note. HSPS = Highly Sensitive Person Scale (Aron & Aron, 1997); RMET = Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001); ECR: Avoidant = Avoidant Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); ECR: Anxious = Anxious Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000). CI = confidence interval. Analyses conducted using PROCESS model 4, $N = 226$. Bootstrap results are based on 5000 bootstrap samples. *$p < .05$. [a]CI = 0.001. Because this CI does not equal zero, the corresponding coefficient is significant.

strengthen these positive relationships.

These hypotheses were tested by estimating a moderated mediation model (Model 17), again with Hayes' PROCESS Macro (version 3.5.2). The effects of neuroticism and avoidant attachment were controlled by entering these variables as covariates. Results were bootstrapped for 5,000 samples. The overall model was significant, $F(10, 212) = 1.98$, $p = .04$, with a small effect size, $R^2 = .06$. Cohen's F^2 was also .06, indicating that the effect of all independent variables on EINNV was small. However, the indices of partial moderated mediation were not significant for either emotion regulation, Index = -0.01, *SE* = 0.01, 95% CI = [-0.02, 0.002], nor self-differentiation, Index = -0.004, *SE* = 0.00, 95% CI = [-0.01, 0.0000], indicating that neither emotion regulation nor self-differentiation moderated the mediation model. The initial portion of Hypotheses 4 was therefore not supported.

Regarding Hypothesis 4(a) predicting the simple moderation effects of emotion regulation, results indicated no significant moderating effects of emotion regulation on the direct effect of anxious attachment on EINNV, *b* = 0.003, *SE* = 0.02, 95% CI = [-0.04, 0.05], nor on the direct effect of SPS on EINNV, *b* = -0.04, *SE* = 0.03, 95% CI = [-0.09, 0.01]. Hypothesis 4a was, therefore, not supported.

Regarding Hypothesis 4(b) predicting the simple moderation effects of self-differentiation, results indicated no significant moderating effects of self-differentiation on the direct effect of anxious attachment on EINNV, *b* = 0.02, *SE* = 0.01, 95% CI = [-0.01, 0.05]. However, self-differentiation did moderate the relationship between SPS and EINNV, *b* = -0.03, *SE* = 0.02, 95% CI = [-0.06, -0.001], although not in the hypothesized direction. Specifically, there was a significant positive effect when both, self-

differentiation was at low levels, and emotion regulation was simultaneously at low and medium levels (actually, low and medium levels of *difficulties* in emotion regulation, since this variable was measured by the Difficulties in Emotion Regulation Scale [DERS-SF; Kaufman et al., 2016]), but not at the high level of self-differentiation. Because lower, and not greater, levels of self-differentiation strengthened the positive relationship between SPS and EINNV, Hypothesis 4b was not supported.

In sum, no component of Hypothesis 4 was supported. For bootstrap coefficient results from testing the moderated mediation model, see Table 8. For a graph depicting the moderation of self-differentiation on the direct effect of SPS on EINNV, see Figure 2. For a graphic representation of the overall results of the moderated mediation model, see Figure 3. Importantly however, as seen in Figure 3, although Hypotheses 3 and 4 were not supported, regression analyses to test Hypothesis 4 found a significant and positive direct effect between SPS and EINNV, $b = 0.21$, $SE = 0.11$, 95% CI = [0.01, 0.44], indicating that SPS did significantly and positively predict EINNV. This significant relationship was found despite the fact that SPS was not found to significantly mediate the relationship between anxious attachment and EINNV.

Summary of Findings from Hypotheses Testing

The current sample, from which the following results stem, was comprised of mostly trainee (based on the number of months of experience reported), female, and White therapists, who reported anxious attachment scores that were about one standard deviation lower than has been found in a large general population sample (Fraley, 2005). Replicating previous research, results found that greater anxious attachment predicted greater SPS, with a large effect size. However, anxious attachment was not a significant

Table 8

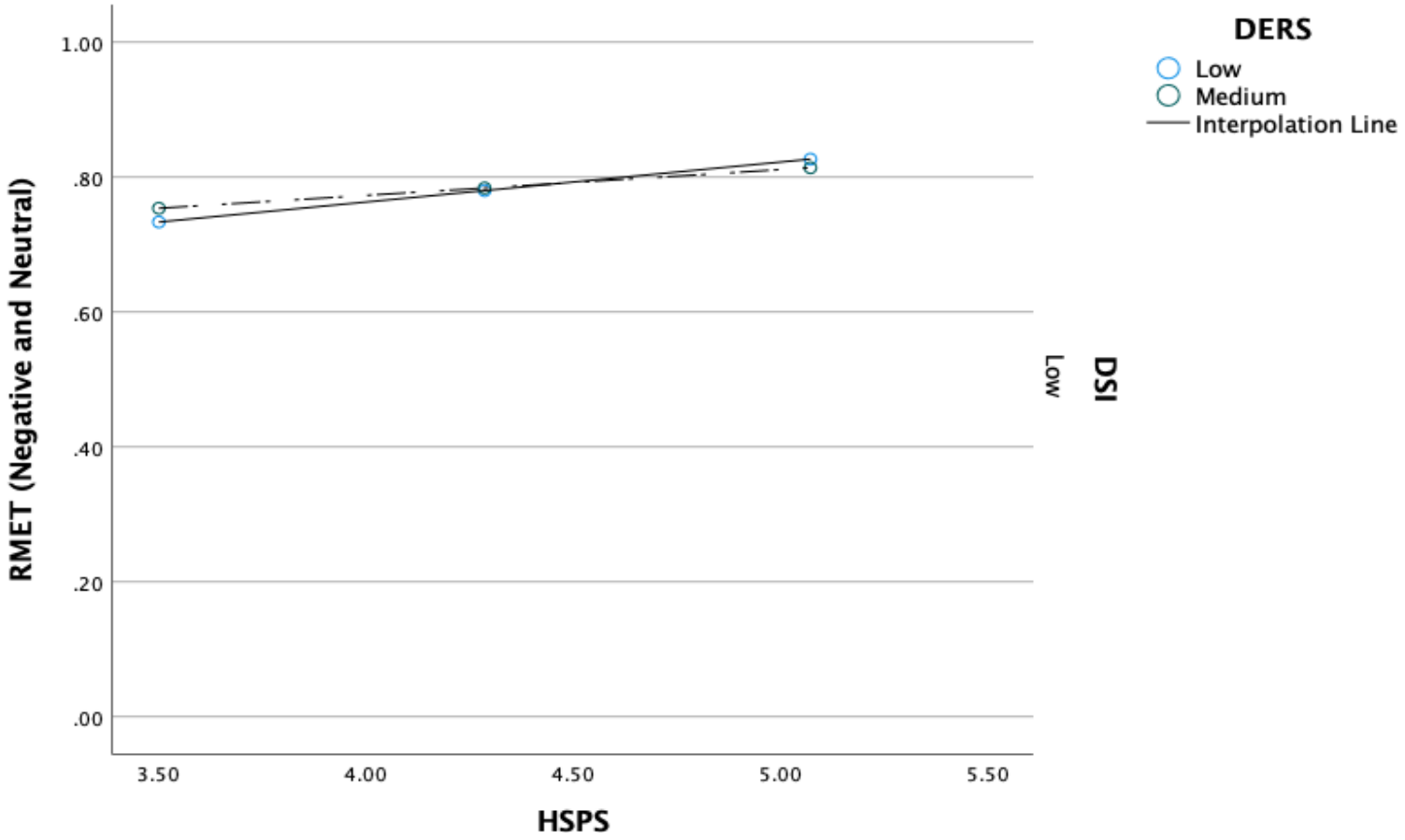
Bootstrap Regression Results from Testing the Moderated Mediation Model

Predictors	On HSPS				On RMET: Negative and Neutral			
	b	*SE*	*p*	95% CI	*b*	*SE*	*p*	95% CI
Neuroticism	0.27*	0.04		[0.19, 0.34]	-0.02*	0.01		[-0.03, -0.00[a]]
ECR: Avoidant	-0.01	0.05		[-0.12, 0.09]	0.00	0.01		[-0.02, 0.02]
ECR: Anxious	0.15*	0.06		[0.04, 0.28]	-0.09	0.10		[-0.30, 0.09]
ECR: Anxious x DERS					0.00	0.02		[-0.04, 0.05]
ECR: Anxious x DSI					0.02	0.01		[-0.01, 0.05]
HSPS					0.21*	0.11		[0.01, 0.44]
HSPS x DERS					-0.04	0.03		[-0.09, 0.01]
HSPS x DSI					-0.03*	0.02		[-0.06, -0.00[a]]
DERS					0.16	0.12		[-0.05, 0.42]
DSI					0.05	0.07		[-0.07, 0.19]
R^2	.32		<.001		.06		.04	
F	33.95				1.98			

Note. HSPS = Highly Sensitive Person Scale (Aron & Aron, 1997); RMET = Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001); ECR: Avoidant = Avoidant Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); ECR: Anxious = Anxious Attachment subscale of Experiences in Close Relationships (ECR-R; Fraley et al., 2000); DERS = Difficulties in Emotion Regulation Scale (DERS-SF; Kaufman et al., 2016); DSI = Differentiation of Self Inventory (DSI-SF; Drake et al., 2015). CI = confidence interval. Analyses conducted using PROCESS model 17, $N = 223$. Bootstrap results are based on 5000 bootstrap samples. *$p < .05$. [a]CI = - 0.001. Because this CI does not equal zero, the corresponding coefficient is significant.

Figure 2

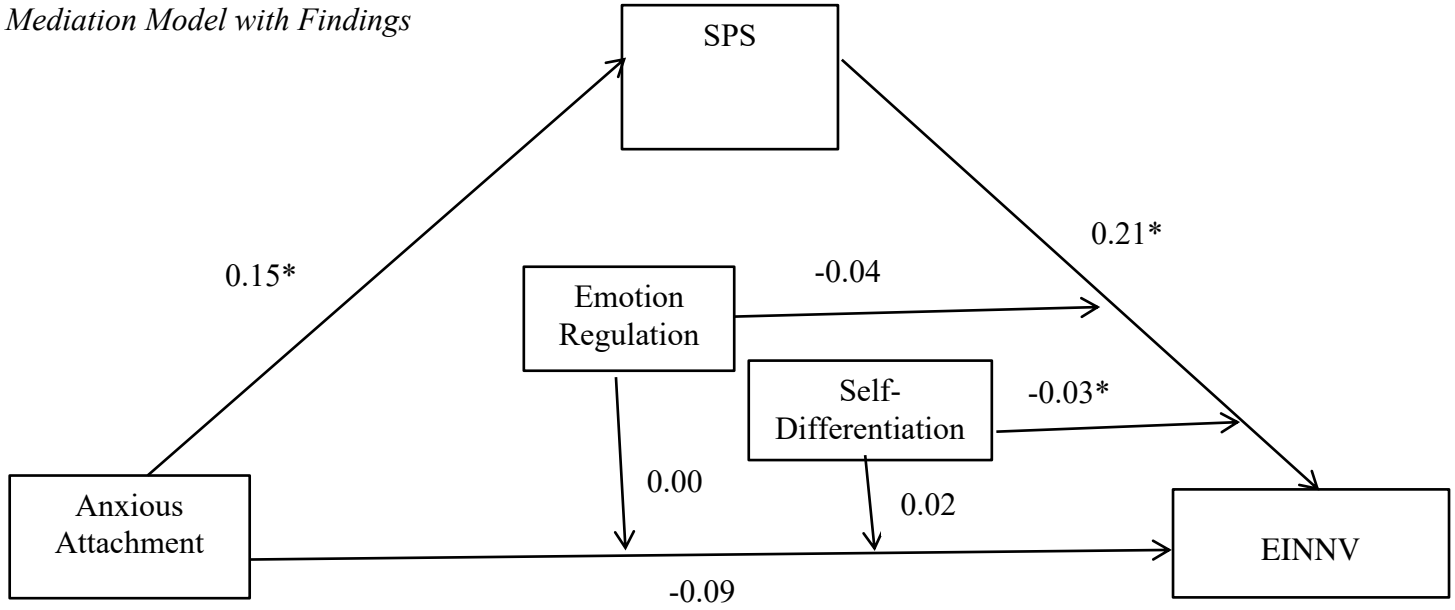
DSI Moderates the Relationship between HSPS and EINNV



Note. This graph shows the moderating effect of self-differentiation on the direct effect of SPS on EINNV, b = -0.03, SE = 0.02, 95% CI = [-0.06, -0.001], controlling for neuroticism and avoidant attachment. RMET = Reading the Mind in the Eyes Test (RMET-R; Baron-Cohen et al., 2001); HSPS = Highly Sensitive Person Scale (Aron & Aron, 1997); DSI = Differentiation of Self Inventory (DSI-SF; Drake et al., 2015); DERS = Difficulties in Emotion Regulation Scale (DERS-SF; Kaufman et al., 2016). Low DERS = 1.43; High DERS = 1.98. Minimum and Maximum values: HSPS: 2.11–6.30; DSI: 1.60–5.70; RMET (negative and neutral): .23–1.00; DERS: 1.06–4.17. Analyses conducted using PROCESS model 17, N = 223. Bootstrap results are based on 5000 bootstrap samples.

Figure 3

Moderated Mediation Model with Findings



Note. The moderated mediation model controlling for neuroticism and avoidant attachment. SPS = sensory processing sensitivity; EINNV = emotion identification accuracy in negative and neutral valences. Emotion regulation was measured using the Difficulties in Emotion Regulation Scale (DERS-SF; Kaufman et al., 2016). Higher scores therefore indicate lower emotion regulation. Analyses conducted using PROCESS model 17, $N = 223$. Beta weights are bootstrapped and unstandardized. *$p < 0.05$.

predictor of EINNV. This effect size was small. SPS was also not found to significantly mediate the relationship between anxious attachment and EINNV. In addition, neither of the prospective moderators, emotion regulation and self-differentiation, were found to moderate this mediation. The effect sizes of both the simple mediation and moderated mediation model were small. Furthermore, neither prospective moderator had any significant moderating effects in the hypothesized directions on path *c'* (the direct effect between anxious attachment and EINNV) or path *b* (the direct effect between SPS and EINNV). The only significant simple moderation effect involved lower (not higher) levels of self-differentiation strengthening the positive relationship between SPS and EINNV (path *g*). Importantly, however, regression analyses for Hypothesis 4 found that SPS did significantly and positively predict EINNV.

In sum, despite the fact that anxious attachment was not found to significantly predict EINNV, and SPS was not found to significantly mediate the relationship between anxious attachment and EINNV, results indicated that anxious attachment significantly predicted higher SPS, which in turn, significantly predicted higher EINNV. Finally, the proposed moderators did not help promote EINNV; and, in fact, lower (and not higher) levels of self-differentiation strengthened the positive relationship between SPS and EINNV.

Exploratory Questions

Exploratory Questions 1-3 were addressed by using Spearman's rho correlations, due to the non-normal distributions of the personal therapy, emotion regulation, and self-differentiation variables.

Question 1

Question 1 assessed the relationship between amount of personal therapy and emotion regulation. Results of the Spearman correlation indicated no significant association between weeks of personal therapy and the DERS, r_s (221) = .12, p = .07. The effect size was small.

Question 2

Question 2 assessed the relationship between amount of personal therapy and self-differentiation. Results of the Spearman correlation indicated a significant association between weeks of personal therapy and the DSI, although this was a negative relationship, r_s (219) = -.26, p <.01. This correlation finding indicates that personal therapy was associated with lower differentiation of self, with a medium effect size. Amount of personal therapy explained 7% of the variability in differentiation of self.

Question 3

Question 3 assessed the relationship between amount of personal therapy and overall emotion identification accuracy. Results of the Spearman correlation indicated no significant association between weeks of personal therapy and scores on the Eyes Test, r_s (222) = .10, p = .12. The effect size was small.

Summary of Findings from Exploratory Questions

The current study's investigation of three exploratory questions assessing the relationship between amount of personal therapy and three variables: emotion regulation, self-differentiation, and overall emotion identification accuracy, found that amount of personal therapy did not promote any of these variables. Findings showed no significant correlation between the amount of personal therapy an individual has undergone and

emotion regulation, nor overall ability to accurately identify others' emotion expressions. These effect sizes were small. However, findings did demonstrate a significant negative relationship, with a medium effect size, between self-differentiation and personal therapy, indicating that the poorer one's self-differentiation, the more psychotherapy they reported.

CHAPTER VI

Discussion

On the broadest level, the present study explored questions related to distress and empathy in a therapist sample. Although distress is traditionally understood to interfere with empathy, a capacity that decades of research have demonstrated as a leading predictor of good psychotherapy treatment outcomes (Wampold & Imel, 2015), some research has nevertheless suggested that some distress-related constructs may, under certain circumstances, enhance empathic ability. One example of a positive link between distress and empathy is the wounded healer phenomenon, which is frequently applied to therapists and suggests that people who have undergone experiences of suffering may have acquired empathic strengths that allow them to be more effective healers (e.g., Hanshew, 1998; Wolgien & Coady, 1997; Zerubavel & Wright, 2012).

The present study proposed anxious attachment and sensory processing sensitivity (SPS), constructs which have been found to significantly positively correlate with each other in non-therapist samples (Jerome & Liss, 2005; Levit-Binnun et al., 2014; Meredith et al., 2016; Meyer et al., 2005), and have been associated with both distress and empathic ability, as operationalizations of the wounded healer phenomenon. More specifically, the present study sought to explore how these variables relate to accurate emotion identification, which research has indicated is an empathic ability (Besel & Yuille, 2010; Chikovani et al., 2015; Gery et al., 2009; Wai & Tiliopoulos, 2012). Because some research has suggested that anxiously attached individuals may have greater abilities than non-anxious individuals in identifying negative and neutral emotional valences (Hunefeldt et al., 2013; Meyer & Levy, 2009), identification of only

these valences was studied. As therapists were expected to represent a population with enhanced empathic abilities, it was hoped that this would further facilitate accurate emotion identification. Finally, the present study explored how anxious attachment and sensory processing sensitivity's link to emotion identification may be influenced by emotion regulation and self-differentiation, two capacities which research has demonstrated are crucial to empathic ability (e.g., Decety & Meyer, 2008). While, unexpectedly, there was no significant relationship between anxious attachment and accurate emotion identification in negative and neutral valences (henceforth referred to simply as "emotion identification") in the current study, sensory processing sensitivity was found to significantly predict emotion identification in this sample of mostly trainee therapists, largely female and White.

Sensory Processing Sensitivity Predicted Emotion Identification

Perhaps the most important finding to come from the present study is that, as expected, sensory processing sensitivity was found to significantly predict accurate emotion identification while the effects of neuroticism and avoidant attachment were controlled. To the researcher's knowledge, this was the first study to explore sensory processing sensitivity in therapists, and to find a connection between sensory processing sensitivity and accurate identification of complex emotions. In addition to sensory processing sensitivity predicting emotion identification, anxious attachment was also found to significantly predict sensory processing sensitivity, replicating previous research findings (Jerome & Liss, 2005; Levit-Binnun et al., 2014; Meredith et al., 2016; Meyer et al., 2005). Therefore, although anxious attachment was not found to significantly predict emotion identification, and sensory processing sensitivity was not found to significantly

mediate the relationship between anxious attachment and emotion identification, this finding suggests that sensory processing sensitivity may offer increased attunement abilities in some anxious therapists which may be harnessed in the service of treatment.

Although previous research has not adequately explored the relationship between the two variables, that sensory processing sensitivity was found to predict emotion identification in the current study with primarily trainee therapists, is in line with research suggesting that highly sensitive people are empathic and attuned (e.g., Acevedo et al., 2014). Previous research (Gerstenberg, 2011; Jagiellowicz et al., 2011) has also suggested that highly sensitive people (non-therapists) are more attuned than non-highly sensitive people to subtleties when processing visual information. It seems this greater attunement may help promote highly sensitive people's recognition of subtle differences in facial or eye expressions. This past research may also be particularly relevant to neutral expressions, given these expressions' greater subtlety and difficulty to read.

Although not necessarily associated with the same kind of "woundedness" or experience of suffering as those with anxious attachment, sensory processing sensitivity is, as previously discussed, nevertheless associated with distress. Research has established a significant association between sensory processing sensitivity and negative affect (Aron et al., 2012; Liss et al., 2005; Liss et al., 2008; Smolewska et al., 2006). The distress traditionally associated with sensory processing sensitivity was also corroborated by the present study's results. Preliminary correlation analyses done in the present study showed that, in addition to being significantly positively correlated with anxious attachment, sensory processing sensitivity was also significantly correlated, with medium to large effects, with difficulties in emotion regulation and low self-differentiation,

enhancing vulnerability to distress. That sensory processing sensitivity helped promote emotional identification, supported the present study's argument that distress-related constructs may not always lead to diminished empathic ability, and, in some cases, may help to promote it. As proposed in the literature review, in the case of sensory processing sensitivity, distress and empathy may be linked by the probability that the sensitivity to stimuli and subtlety which promotes the distress associated with sensory processing sensitivity, may also promote greater sensitivity to others' (emotional) experience. In addition, it is possible that highly sensitive people's own experience with distress contributes to their accurate recognition of it in others.

No Significant Relationship Between Anxious Attachment and Emotion Identification

Unlike with sensory processing sensitivity, however, results did not support the present study's hypothesis that anxious attachment would promote emotion identification. Instead, results showed no significant relationship between anxious attachment and emotion identification, which was not an artifact of the sample size. Previous research exploring this relationship has returned mixed findings: six of the nine studies discussed in the literature review that explored the relationship between anxious or insecure attachment and performance on the Eyes Test, also did not find a significant relationship. Although half of these studies did break down items by valence (Baczkowski & Cierpialkowska, 2015; Cotler, 2012; Wilson, 2010), the researcher of the present study originally attributed their non-significant findings to methodological issues, such as some of these studies' use of less robust valence categorizations than the present study. However, the present study's findings reinforced the possibility that these previous

studies may have not found a significant relationship because none may exist. As discussed previously, however, the anxious attachment mean score from the current sample was about one standard deviation lower than that of published norms (Fraley, 2005). It is unclear whether or how higher anxious attachment among this study's participants may have impacted results.

Findings from recently published studies seem to corroborate that anxious or insecure attachment do not enhance performance on the Eyes Test, and may, in fact, compromise it (Ayribas et al., 2020; Baskak et al., 2019; Ozturk et al., 2020). These recent findings and the present study's findings did not support the theory discussed earlier that anxious individuals, perhaps due to their social hypervigilance and their goals to get close to others, may be better attuned to others' emotions than non-anxious individuals (Fraley et al., 2006; Mikulincer & Shaver, 2003). It is possible that one reason why there was no relationship between anxious attachment and emotion identification in the present study is that both theories discussed in the literature review are somewhat true and may, in a sense, cancel each other out: perhaps whatever efforts anxious individuals expend on reading others may be mitigated by the greater emotional intensity associated with anxious attachment, which may interfere with accurate emotion identification (e.g., Decety & Meyer, 2008). Another possibility is that anxious attachment does in fact promote emotion identification, but it is, more specifically, preoccupied attachment (attachment that is both high in anxiety *and* low in avoidance) which mostly does so, as one study discussed in the literature review found (Meyer & Levy, 2009). As mentioned previously, however, one caveat to this conclusion is that the current study did find that anxious attachment significantly predicted sensory processing sensitivity, and that this

trait, in turn, significantly predicted emotion identification. Perhaps, then, some anxious therapists do have an increased potential for emotional attunement that can be harnessed to enhance their provision of clinical services.

However, if anxious attachment does not promote emotion identification, as the current study found, the broader implication is that, contrary to the present study's expectations, the relational trauma or "woundedness" suggested by anxious attachment may not necessarily promote empathic ability in the form of emotion identification in therapists, at least as it was measured in this study. Perhaps emotion identification on the Eyes Test should not necessarily be taken as a measure of one's broader empathic or healing abilities. Such abilities can of course be more comprehensively assessed through broader or more elaborate means (and to more closely approximate the kind of empathic advantages that promote healing in the therapy room) than the Eyes Test used in the present study. For example, for studies using a therapist sample, assessments using video of hypothetical clients and asking respondents to identify how that person may be feeling, or to actually respond to the video as if the person were their client in therapy with them, may better assess empathic ability. However, such an assessment was beyond the scope of the current study.

Similarly, perhaps anxious attachment is not necessarily a confirmation of woundedness or an experience of suffering that is likely to promote healing abilities. In addition, even if anxious attachment does signify such woundedness, the wounded healer literature has nevertheless suggested that woundedness may best promote the ability to heal others after one has had the opportunity to process, learn, or grow somehow from their experience of suffering (e.g., Wolgien & Coady, 1997; Zerubavel & Wright, 2012).

This piece of processing, learning, and growing from woundedness, which may have been assessed through the concept of earned security, was not explored in the present study.

As far as the two studies discussed in the literature review that did find a positive relationship between anxious attachment and identification of negative or neutral valences on the Eyes Test (Hunefeldt et al., 2013; Meyer & Levy, 2009), there are several differences between their methods and that of the present study that could help explain the discrepant results. Both the Hunefeldt et al. (2013) and Meyer and Levy (2009) studies used different valence categorizations than the present study, and neither of the studies combined negative and neutral valences together as the present study did. Finally, the Meyer and Levy study (2009) found that the participants that were most accurate in the identification of negative-valenced items were not simply those higher in anxious attachment, but those higher in anxious attachment *and* lower in avoidant attachment, or those that have a preoccupied attachment style.

Therapists and Emotion Identification Ability

Regarding the therapist population in particular, although the present study did not compare a therapist to a non-therapist population, results suggested that anxious therapists may not have an advantage in emotion identification over their non-therapist counterparts. That being a therapist may not pose an advantage in emotion identification is in line with the one study found that compared a therapist and non-therapist sample in exploring the relationship between anxious attachment and performance on the Eyes Test (Hill, 2013). Comparing predominantly White samples of 20 practicing therapists and 21 non-therapists, Hill (2013) found that there was no significant difference in emotion

identification on the Eyes Test between therapists and non-therapists, and, as with the present study, found no relationship between anxious therapists and overall emotion identification on the Eyes Test. Although not involving anxious attachment, another study (Hassenstab et al., 2007) comparing therapists and non-therapists also found no difference in the two groups' performance on the Eyes Test.

The Role of the Proposed Moderators: Emotion Regulation and Self-Differentiation

Neither emotion regulation nor self-differentiation were found to moderate the present study's mediation model. In regards to emotion regulation, this ability did not predict emotion identification in more anxious nor highly sensitive therapists. Because research has established the significance of emotion regulation in promoting empathic ability, as emotion regulation diminishes the distress that can interfere with empathy (e.g., Decety & Lamm, 2009), this finding was unexpected. One explanation for this finding is that emotion regulation is not as influential on the particular kind of empathic ability represented by emotion identification of facial or eye expressions. Another explanation is that emotion regulation was not influential on emotion identification because the context of completing the Eyes Test in this study was not threatening or potentially distress-inducing to participants, therefore rendering emotion regulation ability less relevant.

Also contrary to the present study's hypothesis, self-differentiation did not significantly predict emotion identification in anxious therapists. This was unexpected given that research has also established the importance of self-differentiation for empathic ability (Decety & Lamm, 2009). Specifically, research has demonstrated that self-differentiation promotes the capacity for empathy, or concern for the other, by

facilitating the recognition that it is the other that is in distress, and not oneself. Furthermore, and even more relevant to this study, self-differentiation has also been demonstrated to promote social perception (Lawrence et al., 2006). Again, perhaps this unexpected finding can be explained by the fact that completing this dissertation survey was not a threatening enough context to render self-differentiation a meaningful moderator.

Indeed, pictures of others' neutral or negative eye expressions are less distress-inducing than other contexts in which the significance of self-differentiation on empathic ability have been studied, such as with watching alleged patients undergo painful medical treatment (Lamm et al., 2007). In addition, in the study discussed in the literature review finding that self-differentiation promoted social perception (Lawrence et al., 2006), the subject whose emotional state participants were asked to identify was a more fully embodied person than subjects in the Eyes Test, and with whom the experimental design encouraged more emotional engagement. The study's researchers found that those indicating more perceived overlap between themselves and this subject were less accurate in accurately identifying her mental states, and they concluded that a blurring of the lines between self and other was counter-productive to accurate social perception. Although the study's researchers did not specify the reasons why this may be, one may speculate that, among other things, participants with weaker self-other boundaries may be more inclined to project their own emotions onto the subject. Self-differentiation may therefore be less relevant in the Eyes Test, where participants are simply assessing black-and-white pictures of eye expressions, and there is less opportunity for engagement with a study subject.

Although self-differentiation did predict more accurate emotion identification in highly sensitive therapists, it was not in the predicted direction: it was actually low self-differentiation and not high self-differentiation that enhanced emotion identification in highly sensitive therapists. However, this effect was very small. Unlike with highly sensitive therapists, self-differentiation was not found to have any impact on anxious therapist's emotion identification. It is unclear why low self-differentiation may promote emotion identification in highly sensitive therapists, however small the effect, but not have any impact for anxious therapists.

The Role of Therapists' Personal Therapy on Emotion Regulation, Self-Differentiation, and Emotion Identification

Analyses regarding the present study's exploratory questions found no positive relationships between personal therapy and emotion regulation, self-differentiation, or emotion identification. In addition, results showed that therapists with lower self-differentiation reported undergoing more personal therapy. Although, to the researcher's knowledge, no study has explored the effect of personal therapy on emotion regulation, self-differentiation, or emotion identification; some studies have explored the effect of therapists' personal therapy on empathic ability. These studies are very few, however, and the results are somewhat mixed (McIntyre et al., 2019; Peebles, 1980).

One possible explanation for why amount of personal therapy was not related to emotion regulation is that, although one may expect that therapy enhances emotion regulation, it is also likely that the people with poorer emotion regulation may be more incentivized and likely to pursue therapy and stay in therapy longer. Perhaps a similar dynamic is at play regarding the significant relationship that was found between greater

personal therapy and lower self-differentiation. Perhaps those with greater dependency on others, greater need for interpersonal closeness, and greater emotional distress, are also more incentivized and likely to pursue therapy, as well as stay in therapy longer.

The lack of a significant relationship between amount of personal therapy and emotion identification is perhaps the least surprising finding, as these two variables are seemingly more separate constructs with presumably less of a direct relationship with each other than, for example, personal therapy and emotion regulation.

Limitations

The present study had several limitations. The sample was comprised of mostly White and female participants which may limit generalizability to more diverse therapist populations. The sample was also comprised of mostly student therapists. Because the present study was concerned with exploring issues related to distress and empathy in relation to therapists in particular, a sample of more experienced therapists may have better accomplished this goal and allowed for greater differentiation from a non-therapist population. Relatedly, as there was no non-therapist comparison group, the present study could not make clearer conclusions about how a therapist population may be distinguished from non-therapists. In addition, the current sample's anxious attachment scores were relatively low compared to that of published "norms" from the general population (Fraley, 2005), which may have implications for the current results relating to anxious attachment.

Regarding the aims of the current study, if viewed broadly as one concerned with distress and empathy, anxious attachment and sensory processing sensitivity are perhaps too specific and localized as operationalizations of distress or "woundedness." Assessing

the current study's therapist participants for trauma would have offered greater validation for the use of these variables as operationalization of the wounded healer construct. Similarly, the Eyes Test may be too specific of an operationalization of empathic ability, not quite capturing the scope of this construct, as discussed below. In addition, regarding attachment in particular, the present study did not explore preoccupied attachment (which some research has linked to more accurate emotion identification of negative valences [Meyer & Levy, 2009]), or secure attachment. Inclusion of these attachment styles in the analyses would have allowed for a fuller assessment of the potential empathic advantages of anxious attachment by comparison with that of other attachment styles.

Regarding the Eyes Test assessment in particular, there is some controversy on how strongly it is correlated or overlaps with empathy, and it may be more generally accepted that it assesses a particular kind of empathic ability, such as theory of mind (Olderbak et al., 2015). In addition, it may be problematic that negative valence items on the Eyes Test tend to be represented more by people who are older and male (Kynast & Schroeter, 2018), and that test items only feature the eye expressions of White people. Finally, although the Eyes Test is a performance task and not simply a self-report, it still does not involve interaction with people in the real world. An assessment involving such interaction with more embodied or real people would perhaps offer more translatable insights regarding participants' emotion identification and empathic ability in the real world. However, using such an assessment was beyond the scope of the present study, and using this online-friendly assessment allowed the researcher to reach more participants in a shorter amount of time.

Another limitation is that the present study, like all studies using this assessment to explore emotion identification by valence, categorized Eyes Test items (e.g., positive; negative and neutral valences). This may be a limitation because some research has suggested that the Eyes Test is a unidimensional measure assessing only one construct, and should therefore not be broken down into subcategories (Preti et al., 2017). In addition, Hudson et al. (2020) found support for treating item valence continuously rather than categorically. However, the complex statistical models in the present study prohibited defining item valence continuously. That the present study combined negative and neutral valences rather than categorizing them separately, however, limited problems associated with categorizing Eyes Test items, and allowed for more reliable statistical analyses, as discussed earlier. In addition, as also previously discussed, the valence categorization that the present study used is perhaps more reliable than that used by any previous study.

However, another potential limitation of the valence categorization used in the present study (the categorization of each Eyes Test item as negative/neutral or positive in emotional valence) is that it is not based on ratings made by the current study's sample, but by that of another study (Hudson et al., 2020). Although the sample of the Hudson et al. pilot study, on which the current study's valence categorizations are based, are also mostly female and White, theirs was not a therapist sample, as with the current study. It was beyond the scope of this study, however, to conduct a separate pilot study asking therapists to rate the emotional valence of each Eyes Test item. It is unclear to what extent therapists may rate the emotional valence of Eyes Test items differently than non-therapists.

Future Research

Regarding the broader theme of woundedness and empathic ability, future research may explore these constructs in broader, more encompassing ways than anxious attachment and emotion identification on the Eyes Test. If future researchers are particularly interested in exploring the relationship between anxious attachment and emotion identification, it may be beneficial to assess for preoccupied attachment specifically, rather than simply anxious attachment, as discussed previously. Among other ways, researchers may assess for preoccupied attachment with measurements such as the Relationship Styles Questionnaire (RSQ; Griffin & Bartholomew, 1994). As relates to the moderators, future research may explore how emotion regulation and self-differentiation may impact empathic capacity differently in various contexts, such as those with various levels of threat.

To this researcher's knowledge, there has been no research conducted on highly sensitive therapists, and it remains unclear whether highly sensitive therapists may have greater emotional attunement than highly sensitive non-therapists. However, results of the present study suggested that sensory processing sensitivity may confer perceptive or attunement advantages to therapists, something which can be used in the service of psychotherapeutic treatment. Future research may continue to explore issues related to highly sensitive therapists' potential empathic advantages in their work with clients. In addition, given the significant and positive relationship found between anxious attachment and sensory processing sensitivity, future research may explore whether and how this trait may offer increased attunement abilities in some anxious individuals, and

how this capacity may be harnessed for social and relational advantages, as well as the provision of better psychotherapeutic treatment by anxious therapists.

Regarding the present study's exploratory questions, although there have been a few studies on the topic of therapists and personal therapy, there have been very few on how therapists' own personal therapy may impact their empathic capacity, and these studies have returned mixed results. Further exploration in this area may offer new insights and clarity on this issue. Moreover, future researchers may wish to ask study participants more detailed questions regarding their motivations to pursue therapy and stay in therapy, as well as their pre- and post-therapy functioning, to better assess and understand the relationship between personal therapy and capacities such as emotion regulation and self-differentiation, studied here. Finally, to better assess how empathic abilities may differ in therapists in particular, future research may choose to include a comparison group of non-therapists.

Conclusion

Exploring variables related to distress and empathic ability in a sample of mostly White, female, and trainee therapists, this study's most important finding may be that, as expected, sensory processing sensitivity predicted more accurate emotion identification in negative and neutral valences. This study was the first to explore the relationship between sensory processing sensitivity and complex emotion identification, as well as to find that sensory processing sensitivity may promote emotional attunement. This study was also the first to explore sensory processing sensitivity in therapists. Among other ways, these findings contribute to the literature by providing further evidence of the empathic advantages of sensory processing sensitivity, especially in regards to emotional

attunement in therapists, which can be harnessed in the service of psychotherapeutic treatment.

However, contrary to expectations, results found no significant relationship between anxiously attached therapists and accurate facial emotion identification in negative and neutral valences, as several studies with anxiously attached non-therapists have also found. In addition, sensory processing sensitivity was not found to significantly mediate the relationship between anxious attachment and emotion identification. However, although sensory processing sensitivity was not found to significantly mediate this relationship, that results confirmed a significant relationship between anxious attachment and sensory processing sensitivity, as well as between sensory processing sensitivity and emotion identification, introduces the potential for greater emotional attunement in some anxious individuals or therapists, as well as the potential to harness this capacity to enhance relatedness and psychotherapeutic treatment.

That sensory processing sensitivity was found to significantly predict emotion identification also contributes to the present study's broader theme regarding the wounded healer phenomenon by linking the distress associated with sensory processing sensitivity with its empathic advantages. It seems that the same sensitivity to stimuli that characterizes sensory processing sensitivity and renders highly sensitive people more vulnerable to distress, also promotes the sensitivity to subtle differences in emotional expression and more accurate recognition of others' mental states. It is additionally possible, as is part of the rationale for the wounded healer phenomenon, that highly sensitive people's own experience with distress is another contributing factor to their accurate recognition of it in others. Future research may wish to explore whether this

cognitive empathy demonstrated by highly sensitive therapists may also be accompanied by an emotional empathy or resonance, which could be another important asset to harness in their psychotherapeutic work with clients.

References

Acevedo, B. P., Aron, E. N., Aron, A., Sangster, M. D., Collins, N., & Brown, L. L. (2014). The highly sensitive brain: An fMRI study of sensory processing sensitivity and response to others' emotions. *Brain and Behavior*, *4*(4), 580-594.

Acevedo, B., Aron, E., Pospos, S., & Jessen, D. (2018). The functional highly sensitive brain: A review of the brain circuits underlying sensory processing sensitivity and seemingly related disorders. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, *373*(1744), 20170161. https://doi.org/10.1098/rstb.2017.0161

Ainsworth, M. (1979). Infant-mother attachment. *American Psychologist, 34*(10), 932-937.

Arbib, M. (2004). The mirror system hypothesis. Linking language to theory of mind. *Behavioral Brain Sciences*, *16*, 15-28.

Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, *16*(5), 427-454.

Aron, E. N. (2000). *The highly sensitive person in love.* Broadway Books.

Aron, E. N. (2011). *Psychotherapy and the highly sensitive person: Improving outcomes for that minority of people who are the majority of clients*. Routledge.

Aron, E. (2018). *The highly sensitive person*. The highly sensitive person. http://hsperson.com

Aron, E. N., & Aron, A. (1997). Sensory-processing sensitivity and its relation to

introversion and emotionality. *Journal of Personality and Social Psychology*, *73*(2), 345-368.

Aron, E., Aron, A., & Davies, K. M. (2005). Adult shyness: The interaction of temperamental sensitivity and an adverse childhood environment. *Personality and Social Psychology Bulletin, 31*, 181-197.

Aron, E. N., Aron, A., & Jagiellowicz, J. (2012). Sensory processing sensitivity: A review in the light of the evolution of biological responsivity. *Personality and Social Psychology Review*, *16*(3), 262-282.

Aron, A., Ketay, S., Hedden, T., Aron, E. N., Markus, H. R., & Gabrieli, J. D. E. (2010). Temperament trait of sensory processing sensitivity moderates cultural differences in neural response. *Social Cognitive and Affective Neuroscience*, *5*, 219-226. http://dx.doi.org/10.1093/scan/nsq028

Ayribas, B., & Toprak, T. (2021). New approach to patients with premature ejaculation: Do social cognition and attachment profiles play a role in premature ejaculation? *Andrologia*, *53*(1), 1-8.

Bączkowski, B. M., & Cierpiałkowska, L. (2015). Mentalization within close relationships: The role of specific attachment style. *Polish Psychological Bulletin*, *46*(2), 285-299.

Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "Reading the Mind in the Eyes" Test revised version: A study with normal adults, and adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry, 42,* 241-251.

Barr, A. (2006). *Wounded Healer Counsellor Psychotherapist Research*. COSCA

Research Dialogue from The Green Rooms. https://www.thegreenrooms.net/wounded-healer/

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244.

Bartholomew, K., & Shaver, P. R. (1998). Methods of assessing adult attachment: Do they converge? In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 25-45). Guilford Press.

Baskak, B., Kır, Y., Sedes, N., Kuşman, A., Türk, E. G., Baran, Z., Gonullu, I., Artar, M., & Munir, K. (2019). Attachment Style Predicts Cortical Activity in Temporoparietal Junction (TPJ). *Journal of Psychophysiology*, *34*(2), 1-11.

Batson, C. D., & Powell, A. A. (2003). Altruism and prosocial behavior. In T. Millon & M. J. Lerner (Eds.), *Handbook of psychology: Personality and social psychology* (Vol. 5, pp. 463-484). John Wiley & Sons Inc.

Besel, L. D., & Yuille, J. C. (2010). Individual differences in empathy: The role of facial expression recognition. *Personality and Individual Differences*, *49*(2), 107-112.

Blakeslee, S. (2006, January 10). Cells that read minds. *New York Times.* https://www.nytimes.com/2006/01/10/science/cells-that-read-minds.html

Bowlby, J. (1969). *Attachment and loss* (Vol. 1). Basic Books.

Bradley, M. M., & Lang, P. J. (1994). Measuring emotion: The self-assessment manikin and the semantic differential. *Journal of Behavior Therapy and Experimental Psychiatry, 25,* 49-59.

Brennan, K.A., Clark, C.L., & Shaver, P.R. (1998). Self-report measurement of adult romantic attachment: An integrative overview. In J.A. Simpson & W.S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). Guilford Press.

Britton, P.C., & Fuendeling, J.M. (2005). The relation among varieties of adult attachment and the components of empathy. *The Journal of Social Psychology, 145*(5), 519-530.

Brown, C., & Dunn, W. (2002). *Adult/adolescent sensory profile: User's manual*. Psychological Corporation.

Buechler, S. (2008). *Making a difference in patients' lives*. Routledge.

Carlson, S. M., & Moses, L. J. (2001). Individual differences in inhibitory control and children's theory of mind. *Child Development, 72*, 1032-1053.

Cassidy, J., & Kobak, R. R. (1988). Avoidance and its relationship with other defensive processes. In J. Belsky & T. Nezworski (Eds.), *Clinical implications of attachment* (pp. 300-323). Erlbaum.

Chikovani, G., Babuadze, L., Iashvili, N., Gvalia, T., & Surguladze, S. (2015). Empathy costs: Negative emotional bias in high empathisers. *Psychiatry Research*, *229*(1-2), 340-346.

Cohen, S. J. (2009). Healers on the fault lines: Trauma as a risky opportunity for growth, mental flexibility and the penchant for healing others. *International Journal of Applied Psychoanalytic Studies, 6*(3), 211-224.

Connery, A. L., & Murdock, N. L. (2019). An interactive view of countertransference: Differentiation of self and client presentation. *Psychotherapy*, *56*(2), 181-192.

Davis, M.H. (1980). A multidimensional approach to individual differences in empathy.

JSAS Catalogue of Selected Documents in Psychology, 10, 85-104.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, *44*(1), 113-126.

Decety, J., & Lamm, C. (2009). Empathy versus personal distress: Recent evidence from social neuroscience. In J. Decety & W. Ickes (Eds.), *The social neuroscience of empathy* (pp. 199-214). MIT Press.

Decety, J., & Meyer, M. (2008). From emotion resonance to empathic understanding: A social developmental neuroscience account. *Development and Psychopathology, 20*, 1053-1080.

DiCaccavo, A. (2002). Investigating individuals' motivations to become counseling psychologists: The influence of early caretaking roles within the family. *Psychology and Psychotherapy: Theory, Research and Practice, 75*, 463-472.

Drake, J. R., Murdock, N. L., Marszalek, J. M., & Barber, C. E. (2015). Differentiation of self inventory—Short form: Development and preliminary validation. *Contemporary Family Therapy*, *37*, 101-112.

Dunn, W. (2001). The sensations of everyday life: Empirical, theoretical, and pragmatic considerations. *American Journal of Occupational Therapy, 55*, 608-620. http://dx.doi.org/10.5014/ajot.55.6.608

Dziobek, I., Fleck, S., Kalbe, E., Rogers, K., Hassenstab, J., Brand, M., Kessler, J., Woike, J.K., Wolf, O.T. & Convit, A. (2006). Introducing MASC: A movie for the assessment of social cognition. *Journal of Autism and Developmental Disorders*, *36*(5), 623-636.

Eams, V., & Roth, A. (2000). Patient attachment orientation and the early working alliance: A study of patient and therapist reports of alliance quality and ruptures. *Psychotherapy Research, 10*(4), 421-434.

Ehrenberg, D.B. (1992). *The intimate edge: Extending the reach of psychoanalytic interaction*. W.W. Norton & Company.

Ekman, P., Friesen, W.V. (1976). *Pictures of facial affect*. Consulting Psychologists Press.

Eysenck, S.B., Pearson, P.R., Easting, G., & Allsopp, J.F. (1985). Age norms for impulsiveness, venturesomeness and empathy in adults. *Personality and Individual Differences, 6*, 613-619.

Fan, Y., Duncan, N., de Greck, M., & Northoff, G. (2011). Is there a core neural network in empathy? An fMRI based quantitative meta-analysis. *Neuroscience Biobehavior, 35*, 903-911.

Farber, B. A., Manevich, I., Metzger, J., & Saypol, E. (2005). Choosing psychotherapy as a career: Why did we cross that road? *Journal of Clinical Psychology, 61*(8), 1009-1031.

Feeney, J. A., Noller, P., & Hanrahan, M. (1994). Assessing adult attachment. In M. B. Sperling & W. H. Berman (Eds.), *Attachment in adults: Clinical and developmental perspective* (pp. 128-151). Guilford Press.

Fernández-Abascal, E. G., Cabello, R., Fernández-Berrocal, P., & Baron-Cohen, S. (2013). Test-retest reliability of the 'Reading the Mind in the Eyes' test: A one-year follow-up study. *Molecular Autism*, *4*(1), 1-6.

Finlay-Jones, A., Kane, R., & Rees, C. (2017). Self-compassion online: A pilot study of

an internet-based self-compassion cultivation program for psychology trainees. *Journal of Clinical Psychology*, *73*(7), 797-816.

Firestone, R., Cattlet, J., & Seidan, R.D. (1987). *The fantasy bond: Structure of psychological defenses*. Glendon Publishing.

Fonagy, P., & Target, M. (1997). Attachment and reflective function: Their role in self-organization. *Development and Psychopathology*, *9*(4), 679-700.

Fraley, R.C. (2005, July 23). *Information on the Experiences in Close Relationships-Revised (ECR-R) adult attachment questionnaire*. University of Illinois at Urbana-Champaign. http://labs.psychology.illinois.edu/~rcfraley/measures/ecrr.htm

Fraley, R., Niedenthal, P. M., Marks, M., Brumbaugh, C., & Vicary, A. (2006). Adult attachment and the perception of emotional expressions: Probing the hyperactivating strategies underlying anxious attachment. *Journal of Personality*, *74*(4), 1163-1190.

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item-response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, *78*, 350-365.

Gearhart, C. C. (2011). The impact of sensory-processing sensitivity on communication: A preliminary self-report study. In *Annual meeting of the National Communication Association*, New Orleans, LA, United States.

George, C., Kaplan, N., & Main, M. (1985-1996). *Adult attachment interview (third edition*). [Unpublished manuscript]. Department of Psychology, University of California, Berkeley.

George, C., & West, M.L. (2012). *The adult attachment projective picture system:*

Attachment theory and assessment in adults. Guilford Press.

Gerstenberg, F. X. (2012). Sensory-processing sensitivity predicts performance on a visual search task followed by an increase in perceived stress. *Personality and Individual Differences*, *53*(4), 496-500.

Gery, I., Miljkovitch, R., Berthoz, S., & Soussignan, R. (2009). Empathy and recognition of facial expressions of emotion in sex offenders, non-sex offenders and normal controls. *Psychiatry Research*, *165*(3), 252-262.

Goldstein, T. R., & Bloom, P. (2010). *The effects of acting training on theory of mind, empathy, and emotion regulation*. [Unpublished doctoral dissertation]. Department of Psychology, Boston College.

Griffin, D.W., & Bartholomew, K. (1994). The metaphysics of measurement: The case of adult attachment. *Personal Relationships, 5,* 17-52.

Grossenbacher, P. G., Rothbart, M. K., & Derryberry, D. (1990). *Manual for physiological reactivity questionnaire (PRQ)* [Unpublished manuscript]. Department of Experimental Psychology, University of Oregon.

Hall, J. A. (2001). The PONS test and the psychometric approach to measuring interpersonal sensitivity. In J. A. Hall & F. J. Bernieri (Eds.), *Interpersonal sensitivity: Theory and measurement* (pp. 143-160). Erlbaum.

Handford, C., Lemon, J., Grimm, M. C., & Vollmer-Conna, U. (2013). Empathy as a function of clinical exposure: Reading emotion in the eyes. *PloS one*, *8*(6), 1-7.

Hanshew, E. R. (1998). *An investigation of the wounded healer phenomenon: Counselor trainees and their self-conscious emotions and mental health* [Unpublished doctoral dissertation]. Department of Counseling, Georgia State University.

Harkness, K., Sabbagh, M., Jacobson, J., Chowdrey, N., & Chen, T. (2005). Enhanced accuracy of mental state decoding in dysphoric college students. *Cognition & Emotion*, *19*(7), 999-1025.

Hassenstab, J., Dziobek, K., Rogers, K., Wolf, O.T., & Convit, A. (2007). Knowing what others know, feeling what others feel: A controlled study of empathy in psychotherapists. *Journal of Nervous and Mental Disease, 195*(4), 277-281.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). The Guilford Press

Hill, M. (2013). *Attachment and mentalizing in counselling psychologists and psychotherapists: An exploration using self-report, behavioural and eye-tracking measures*. [Unpublished doctoral dissertation]. Department of Counselling Psychology, Rosehampton University.

Hudson, C. C., Shamblaw, A. L., Harkness, K. L., & Sabbagh, M. A. (2020). Valence in the Reading the Mind in the Eyes task. *Psychological assessment*, *32*(7), 623-634.

Hunefeldt, T., Laghi, F., & Ortu, F. (2013). Are anxiously attached women better mindreaders? *Cognitive Processing*, *14*(3), 317-321.

Jackson, H., & Nuttall, R. (1997). *Childhood abuse: Effects on clinicians' personal and professional lives*. Sage Publications.

Jagiellowicz, J., Aron, A., & Aron, E. N. (2016). Relationship between the temperament trait of sensory processing sensitivity and emotional reactivity. *Social Behavior and Personality: An International Journal*, *44*(2), 185-199.

Jagiellowicz, J., Xu, X., Aron, A., Aron, E. N., Cao, G., Feng, T., & Weng, X. (2011). Sensory processing sensitivity and neural responses to changes in visual scenes. *Social Cognitive and Affective Neuroscience, 6*, 38-47. doi: 1093/scan/nsq001

Jamieson, J., & Scherman, R. (2014). Making sense of the "wounded healer" phenomenon. *Ata: Journal of Psychotherapy Aotearoa New Zealand*, *18*(1), 67-79.

Jankowski, P. J., & Hooper, L. M. (2012). Differentiation of self: A validation study of the Bowen theory construct. *Couple and Family Psychology: Research and Practice, 1,* 226-243. http://dx.doi.org/10.1037/a0027469

Jerome, E. M., & Liss, M. (2005). Relationships between sensory processing style, adult attachment, and coping. *Personality and Individual Differences, 38*, 1341-1352. http://dx.doi.org/10.1016/j.paid.2004.08.016

Jung, C. G. (1913). The theory of psychoanalysis. *Psychoanalytic Review*, *1*(1), 1-40.

Jung, C. G. (1966). Fundamental questions of psychotherapy (R.F.C. Hull, Trans.). In H. Read, M. Fordham, G. Adler, & W. McGuire (Eds.), *The collected works of C. G. Jung*, Bollingen Series (2nd ed., Vol. 16, pp. 111-125). Princeton University Press (Original work published 1951).

Kanemasa, Y. (2005). Effects of believes and expectations about self and others on emotional recognition of facial expressions: From the perspective of adult attachment. *Shinrigaku Kenkyu: The Japanese Journal of Psychology*, *76*(4), 359-367.

Kaufman, E. A., Xia, M., Fosco, G., Yaptangco, M., Skidmore, C. R., & Crowell, S. E. (2016). The difficulties in emotion regulation scale short form (DERS-SF):

Validation and replication in adolescent and adult samples. *Journal of Psychopathology and Behavioral Assessment*, *28*, 443-455.

Kerr, M. E., & Bowen, M. (1988). *Family evaluation*. Norton and Company.

Kynast, J., & Schroeter, M. L. (2018). Sex, age and emotional valence: Revealing possible biases in the 'Reading the Mind in the Eyes' task. *Frontiers in Psychology, 9,* Article 570. http://dx.doi.org/10.3389/fpsyg.2018.00570

Larsen, R. J., & Diener, E. (1987). Affect intensity as an individual difference characteristic: A review. *Journal of Research in Personality, 21*, 1-39.

Laverdière, O., Kealy, D., Ogrodniczuk, J. S., & Descôteaux, J. (2019). Got empathy? A latent profile analysis of psychotherapists' empathic abilities. *Psychotherapy and Psychosomatics, 88*(1), 41-42.

Lawrence, E. J., Shaw, P., Baker, D., Baron-Cohen, S., & David, A. S. (2004). Measuring empathy: Reliability and validity of the Empathy Quotient. *Psychological Medicine*, *34*(5), 911-920.

Lawrence, E. J., Shaw, P., Giampietro, V. P., Surguladze, S., Brammer, M. J., & David, A. S. (2006). The role of 'shared representations' in social perception and empathy: An fMRI study. *Neuroimage*, *29*(4), 1173-1184.

Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology, 68*, 151-158.

Levit-Binnun, N., Szepsenwol, O., Stern-Ellran, K., & Engel-Yeger, B. (2014). The relationship between sensory responsiveness profiles, attachment orientations, and anxiety symptoms. *Australian Journal of Psychology, 66*, 233-240.

http://dx.doi.org/10.1111/ajpy.12064

Liss, M., Mailloux, J., & Erchull, M. J. (2008). The relationships between sensory processing sensitivity, alexithymia, autism, depression, and anxiety. *Personality and Individual Differences*, *45*(3), 255-259.

Loehlin, J., Nichols, R. (1976). *Heredity, environment and personality: A study of 850 sets of twins*. University of Texas Press.

Main, M. (1990). Cross-cultural studies of attachment organization: Recent studies, changing methodologies, and the concept of conditional strategies. *Human Development, 33*, 48-61.

Marmarosh, C. L., Schmidt, E., Pembleton, J., Rotbart, E., Muzyk, N., Liner, A., ... & Salmen, K. (2015). Novice therapist attachment and perceived ruptures and repairs: A pilot study. *Psychotherapy*, *52*(1), 140-144.

McIntyre, S.L., Samstag, L.W., Haden, S.C., & Duncan, J.W. (2017) *Therapist states that facilitate the empathic process: Attachment, shame, fear, fantasy, personal distress, and expression recognition* [Doctoral Dissertation, Long Island University-Brooklyn]. ProQuest Dissertations & Theses Global.

McIntyre, S. L., Samstag, L. W., Haden, S. C., & Duncan, J. W. (2019). Therapist experience, personal therapy, and distressing states of mind: Regulation and resonance as dialectics of therapeutic empathy. *Journal of Contemporary Psychotherapy*, *49*(4), 213-221.

Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality, 40*, 525–543.

Meredith, P. J., Bailey, K. J., Strong, J., & Rappel, G. (2016). Adult attachment, sensory

processing, and distress in healthy adults. *American Journal of Occupational Therapy, 70*(1), 1-8. http://dx.doi.org/10.5014/ajot.2016.017376

Meyer, B., Ajchenbrenner, M., & Bowles, D. P. (2005). Sensory sensitivity, attachment experiences, and rejection responses among adults with borderline and avoidant features. *Journal of Personality Disorders, 19*, 641-658. http://dx.doi.org/10.1521/pedi.2005.19.6.641

Meyer, J. K. & Levy, K. N. (2009). In the eye of the beholder: Attachment style differences in emotion perception. *The Penn State McNair Journal*, *16*, 74-87.

Mikulincer, M., & Shaver, P. R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. *Advances in Experimental Social Psychology, 35*, 53-152.

Mikulincer, M., & Shaver, P. R. (2017). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Press.

Mikulincer, M., Shaver, P. R., Gillath, O., & Nitzberg, R. A. (2005). Attachment, caregiving, and altruism: Boosting attachment security increases compassion and helping. *Journal of Personality and Social Psychology*, *89*(5), 817-839.

Miller, P. A., & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin, 103*, 324-344.

Niedenthal, P. M., Halberstadt, J. B., Margolin, J., & Innes-Ker, Å. H. (2000). Emotional state and the detection of change in facial expression of emotion. *European Journal of Social Psychology*, *30*(2), 211-222.

Nigro, T. L. B. (2004). *The association between psychologists' attachment patterns and their experiences with clients including sexual attraction and sexual contact: A*

national survey (Publication No. NR05514) [Doctoral Dissertation, University of Victoria]. ProQuest Dissertations & Theses Global.

Norcross, J. C. (2005). The psychotherapist's own psychotherapy: Educating and developing psychologists. *American Psychologist, 60*(8), 840-850.

O'Brien, J. L., & Haaga, D. A. (2015). Empathic accuracy and compassion fatigue among therapist trainees. *Professional Psychology: Research and Practice*, *46*(6), 414-420.

Olderbak, S., Wilhelm, O., Olaru, G., Geiger, M., Brenneman, M. W., & Roberts, R. D. (2015). A psychometric analysis of the reading the mind in the eyes test: Toward a brief form for research and applied settings. *Frontiers in Psychology*, *6*, 1-14.

Orlinsky, D. E., & Rønnestad, M. H. (2005). *How psychotherapists develop: A study of therapeutic work and professional growth*. American Psychological Association.

Öztürk, Y., Özyurt, G., Turan, S., Mutlu, C., Tufan, A. E., & Akay, A. P. (2020). Relationships between theory of mind (ToM) and attachment properties in adolescent with social anxiety disorder. *Archives of Neuropsychiatry*, *57*(1), 65-70.

Padykula, N. L., & Horwitz, M. (2012). Using psychodynamic concepts to measure interpersonal competencies during social work training. *International Journal of Applied Psychoanalytic Studies*, *9*(1), 48-61.

Parker, G., Tupling, H., & Brown, L. (1979). A parental bonding instrument. *British Journal of Medical Psychology, 52*, 1-10.

Parpottas, P., & Draghi-Lorenz, R. (2015). Effects of therapists' attachment organization

on the process and outcome of therapy: A review of the empirical literature. *Counselling Psychology Review*, *30*(4), 44-56.

Peebles, M. J. (1980). Personal therapy and ability to display empathy, warmth and genuineness in psychotherapy. *Psychotherapy: Theory, Research & Practice, 17*(3), 258-262. https://doi.org/10.1037/h0085919

Posner, M. I., & Rothbart, M. K. (2000). Developing mechanisms of self-regulation. *Development and Psychopathology, 12*, 427-441.

Preti, A., Vellante, M., & Petretto, D. R. (2017). The psychometric properties of the "Reading the Mind in the Eyes" Test: An item response theory (IRT) analysis. *Cognitive Neuropsychiatry*, *22*(3), 233-253.

Prevost, M., Carrier, M. E., Chowne, G., Zelkowitz, P., Joseph, L., & Gold, I. (2014). The Reading the Mind in the Eyes Test: Validation of a French version and exploration of cultural variations in a multi-ethnic city. *Cognitive Neuropsychiatry*, *19*(3), 189-204.

Rogers, C. R. (1992). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting and Clinical Psychology, 60*(6), 827-832.

Roger, D., & Najarian, B. (1989). The construction and validation of a new scale for measuring emotion control. *Journal of Personality and Individual Differences, 10*, 845-853.

Rosenthal, H., Hall, J.A., DiMatteo, M.R., Rogers, P.L., Archer, D. (1979). *Sensitivity to nonverbal communication: The PONS Test*. The Johns Hopkins University Press.

Rothbart, M.K., Ahadi, S. A., & Hershey, K. L. (1994). Temperament and social behavior in childhood. *Merrill–Palmer Quarterly, 40*, 21-39.

Rubino, G., Barker, C., Roth, T., & Fearon, P. (2000). Therapist empathy and depth of interpretation in response to potential alliance ruptures: The role of therapist and patient attachment styles. *Psychotherapy Research*, *10*(4), 408-420.

Safran, J.D. (1993). Breaches in the therapeutic alliance: An arena for negotiating authentic relatedness. *Psychotherapy, Research, Practice, and Training, 30*(1), 11-24.

Safran, J. D., Muran, J. C., & Samstag, L. W. (1994). Resolving therapeutic alliance ruptures: A task analytic investigation. In A.O. Horvath & L.S. Greenberg (Eds.), *The working alliance: Theory, research, and practice* (pp. 225-255). John Wiley & Sons.

Safran, J. D., Muran, J. C., Samstag, L. W., & Stevens, C. (2001). Repairing alliance ruptures. *Psychotherapy: Theory, Research, Practice, Training, 38*(4), 406-412. https://doi.org/10.1037/0033-3204.38.4.406

Scott, L. N., Levy, K. N., Adams Jr, R. B., & Stevenson, M. T. (2011). Mental state decoding abilities in young adults with borderline personality disorder traits. *Personality Disorders: Theory, Research, and Treatment*, *2*(2), 98-112.

Sedgwick, D. (1993). *Jung and Searles: A comparative study.* Routledge.

Shaver, P.A. & Fraley, R.C. (2006, June). *Self-report measures of adult attachment*. http://www.psych.uiuc.edu/~rcfraley/measures/measures.html

Sibley, C. G., & Liu, J. H. (2004). Short-term temporal stability and factor structure of the revised experiences in close relationships (ECR-R) measure of adult attachment. *Personality and Individual Differences*, *36*(4), 969-975.

Skowron, E. A., & Friedlander, M. L. (1998). The Differentiation of Self Inventory:

Development and initial validation. *Journal of Counseling Psychology, 45*, 235-246. http://dx.doi.org/10.1037/0022-0167.45.3.235

Skowron, E. A., & Schmitt, T. A. (2003). Assessing interpersonal fusion: Reliability and validity of a new DSI fusion with others subscale. *Journal of Marital and Family Therapy, 29*(2), 209-222.

Sloan, D., & van Dierendonck, D. (2016). Item selection and validation of a brief, 20-item version of the Differentiation of Self Inventory—Revised. *Personality and Individual Differences*, *97*, 146-150.

Smolewska, K. A., McCabe, S. B., & Woody, E. Z. (2006). A psychometric evaluation of the Highly Sensitive Person Scale: The components of sensory-processing sensitivity and their relation to the BIS/BAS and "Big Five." *Personality and Individual Differences*, *40*(6), 1269-1279.

Sullivan, H. S. (1940). Conceptions of modern psychiatry: The first William Alanson White memorial lectures. *Psychiatry*, *3*(1), 1-117.

Thomas, J. (2013). Association of personal distress with burnout, compassion fatigue, and compassion satisfaction among clinical social workers. *Journal of Social Service Research*, *39*(3), 365-379.

Trusty, J., Ng, K., & Watts, R.E. (2005). Model of effects of adult attachment on emotional empathy of counseling students. *Journal of Counseling & Development, 83*(1), 66-77.

Wai, M., & Tiliopoulos, N. (2012). The affective and cognitive empathic nature of the dark triad of personality. *Personality and Individual Differences*, *52*(7), 794-799.

Wampold, B. E., & Imel, Z. E. (2015). *The great psychotherapy debate: The evidence for*

what makes psychotherapy work. Routledge.

Warrier, V., Grasby, K. L., Uzefovsky, F., Toro, R., Smith, P., Chakrabarti, B., Khadake, J., Mawbey-Adamson, E., Litterman, N., Hottenga, J.J., Lubke, G., Boomsma, D.I., Martin, N.G., Hatemi, P.K., Medland, S.E., Hinds, D.A., Bourgeron, T., & Baron-Cohen, S. (2018). Genome-wide meta-analysis of cognitive empathy: Heritability, and correlates with sex, neuropsychiatric conditions and cognition. *Molecular Psychiatry*, *23*(6), 1402-1409.

Watts, R. E., Trusty, J., Canada, R., & Harvill, R. L. (1995). Perceived early childhood family influence and counseling effectiveness: An exploratory study. *Counselor Education and Supervision, 35*, 104-110.

Wilcoxon, S. A., Walker, M. R., & Hovestadt, A. J. (1989). Counselor effectiveness and family-of-origin experiences: A significant relationship? *Counseling and Values, 33*, 225-229.

Wolgien, C. S., & Coady, N. F. (1997). Good therapists' beliefs about the development of their helping ability: The wounded healer paradigm revisited. *The Clinical Supervisor*, *15*(2), 19-35.

Zerubavel, N., & Wright, M. O. D. (2012). The dilemma of the wounded healer. *Psychotherapy*, *49*(4), 482-491.

APPENDIX A

Consent Form

LONG ISLAND UNIVERSITY—BROOKLYN
Informed Consent Form for Human Research Subjects

You are being asked to volunteer in a research study called Attachment Anxiety, Sensory Processing Sensitivity, and Empathy in a Therapist Sample, conducted by Dara Salem, a Ph.D. student in the Clinical Psychology Department of LIU-Brooklyn. This project will be supervised by Lisa Wallner Samstag, Ph.D., Professor of Psychology at LIU-Brooklyn, and Director of Psychotherapy Research at its Psychological Services Center. The purpose of the research is to better understand issues related to distress and empathy in psychotherapists.

As a participant, you will be asked to complete eight measures online, including a brief demographic questionnaire. Your participation should take approximately 15-25 minutes, and will require your completion of questionnaires via Qualtrics.com. The researchers do not anticipate your participation in this study will pose any risk or discomfort to you. However, although unlikely, it is possible that some participants may be triggered by completing questionnaires concerning their relationships, emotion regulation ability, and distress. For such cases, mental health resources will be provided in the debriefing form at the end of the protocol. As a thank you for your time, you will be entered into a raffle for a chance to win one of six $50 Amazon gift cards, if you choose to enter the raffle and provide your email address (only those participants who complete the entire protocol will be eligible to be included in the raffle). In addition, your participation will contribute valuable information regarding empathy to the field of psychotherapy.

Your identity as a participant will remain confidential. Your name is not included in any documents, including this consent form. The only identifying information from all documents you will complete is your email address, if you choose to provide it on the demographic questionnaire in order to be entered into the raffle. Email addresses will be available only to the student investigator and will be stored separately from survey responses in a password-protected file on the student investigator's password-protected computer. That document will be deleted after the raffle winners are identified upon the completion of data collection. Per federal guidelines, all research data (data pertaining to responses to the questionnaires) will be destroyed at the end of five years. Results will be reported only in the aggregate. If you are interested in seeing these results, you may contact the principal investigator.

If you have questions about the research, you may contact the student investigator, Dara Salem, at therapistempathystudy@gmail.com; faculty advisor, Dr. Lisa Samstag, at lisa.samstag@liu.edu; or the department chair, Dr. Elizabeth Kudadjie-Gyamfi, at elizabeth.kudadjie-gyamfi@liu.edu. If you have questions concerning your rights as a subject, you may contact the Institutional Review Board Administrator, Dr. Lacey Sischo, at (516) 299-3591 or lacey.sischo@liu.edu.

Your participation in this research is voluntary. Refusal to participate (or discontinue participation) will involve no penalty or loss of benefits to which you are otherwise entitled. You may also stop participation at any time. Partial responses will, however, be kept and included in data analyses. Please note that to be eligible for a gift card you must have completed all questionnaires, provided your email address, AND your participation must be deemed valid (i.e. nonrandom responding in an appropriate time frame). You may have your data deleted at any time by contacting Dara Salem at therapistempathystudy@gmail.com.

By checking "I confirm my consent to participate" below, you indicate that you have fully read the above text and have given your informed consent to participate in this study.

☐ I confirm my consent to participate

Please write today's date below:

_____

APPENDIX B

Sample Eyes Test (RMET) Item
(from negative and neutral category)

- Serious
- Ashamed
- Bewildered
- Alarmed

APPENDIX C

The Highly Sensitive Person Scale (HSPS)

Please answer the following questions on a scale of 1 (Not At All) to 7 (Extremely).

____ 1. Are you easily overwhelmed by strong sensory input?
____ 2. Do you seem to be aware of subtleties in your environment?
____ 3. Do other people's moods affect you?
____ 4. Do you tend to be more sensitive to pain?
____ 5. Do you find yourself needing to withdraw during busy days, into bed or into a Darkened room or any place where you can have some privacy and relief from stimulation?
____ 6. Are you particularly sensitive to the effects of caffeine?
____ 7. Are you easily overwhelmed by things like bright lights, strong smells, coarse fabrics, or sirens close by?
____ 8. Do you have a rich, complex inner life?
____ 9. Are you made uncomfortable by loud noises?
___ 10. Are you deeply moved by the arts or music?
___ 11. Does your nervous system sometimes feel so frazzled that you just have to go off By yourself?
___ 12. Are you conscientious?
___ 13. Do you startle easily?
___ 14. Do you get rattled when you have a lot to do in a short amount of time?
___ 15. When people are uncomfortable in a physical environment do you tend to know what needs to be done to make it more comfortable (like changing the lighting or the seating)?
___ 16. Are you annoyed when people try to get you to do too many things at once?
___ 17. Do you try hard to avoid making mistakes or forgetting things?
___ 18. Do you make a point to avoid violent movies and TV shows?
___ 19. Do you become unpleasantly aroused when a lot is going on around you?
___ 20. Does being very hungry create a strong reaction in you, disrupting your concentration or mood?
___ 21. Do changes in your life shake you up?
___ 22. Do you notice and enjoy delicate or fine scents, tastes, sounds, works of art?
___ 23. Do you find it unpleasant to have a lot going on at once?
___ 24. Do you make it a high priority to arrange your life to avoid upsetting or overwhelming situations?
___ 25. Are you bothered by intense stimuli, like loud noises or chaotic scenes?
___ 26. When you must compete or be observed while performing a task, do you become so nervous or shaky that you do much worse than you would otherwise?
___ 27. When you were a child, did parents or teachers seem to see you as sensitive or shy?

APPENDIX D

Experiences in Close Relationships Questionnaire—Revised (ECR-R)

Below is a list of ways people sometimes feel in close relationships. Please rate the extent to which each item is representative of how you generally feel in close relationships, with *1 being strongly disagree* and *7 being strongly agree*.

1. It's not difficult for me to get close to my partner.
2. I'm afraid that I will lose my partner's love.
3. I get uncomfortable when a romantic partner wants to be very close.
4. I often worry that my partner doesn't really love me.
5. I find it relatively easy to get close to my partner.
6. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
7. I prefer not to be too close to romantic partners.
8. I often worry that my partner will not want to stay with me.
9. I feel comfortable depending on romantic partners.
10. When my partner is out of sight, I worry that he or she might become interested in someone else.
11. It's easy for me to be affectionate with my partner.
12. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.
13. I feel comfortable sharing my private thoughts and feelings with my partner.
14. I don't feel comfortable opening up to romantic partners.
15. I rarely worry about my partner leaving me.
16. I talk things over with my partner.
17. I do not often worry about being abandoned.
18. I worry a lot about my relationships.
19. I find that my partner(s) don't want to get as close as I would like.
20. I find it easy to depend on romantic partners.
21. Sometimes romantic partners change their feelings about me for no apparent reason.
22. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.
23. I prefer not to show a partner how I feel deep down.
24. I tell my partner just about everything.
25. It makes me mad that I don't get the affection and support I need from my partner.
26. I worry that I won't measure up to other people.
27. I usually discuss my problems and concerns with my partner.
28. My partner only seems to notice me when I'm angry.
29. It helps to turn to my romantic partner in times of need.
30. My desire to be very close sometimes scares people away.

31. I find it difficult to allow myself to depend on romantic partners.
32. I am very comfortable being close to romantic partners.
33. I worry that romantic partners won't care about me as much as I care about them.
34. I am nervous when partners get too close to me.
35. My romantic partner makes me doubt myself.
36. My partner really understands me and my needs.