THE RELATIONSHIP BETWEEN SHAME AND ATTACHMENT STYLES

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Despite research documenting the association between shame and aspects of poor psychological functioning, shame’s adverse effects have remained largely invisible in modern societies. Shame has been described as the “attachment emotion” (Lewis, 1980), yet, there is little research that examines the relationship between attachment style and shame, and conclusions from this research are tempered by methodological limitations. The current study aimed to address methodological limitations with a quasi-experimental design and employed measures of state and trait shame, shame coping styles, an Emotional Stroop task for assessing implicit shame, and a shame mood induction procedure (MIP). This methodology provided a basis to examine differences by attachment style for 271 university students in state, trait, and implicit shame, as well as the use of maladaptive shame coping styles at baseline and following a shame MIP. Additionally, a qualitative analysis of the shame MIP written responses was conducted to provide a more nuanced understanding of the task used to elicit feelings of shame and individual differences in events identified as shame-triggering. Results revealed that students evidencing an insecure attachment style (i.e., preoccupied, fearful or dismissive) reported significantly more state and trait shame compared to students evidencing a secure attachment style after the shame MIP. Individuals with an insecure attachment style also demonstrated significant increases in state shame from baseline to post-MIP. Additionally, students with a preoccupied or fearful attachment style were also significantly more likely to endorse utilizing maladaptive shame coping strategies compared to students with a secure attachment style. Clinical implications, limitations, and future research directions are discussed.
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CHAPTER 1
INTRODUCTION

Although shame is associated with powerful feelings of being exposed and helpless, it is experienced in everyday life, and, at typical levels, it is considered to promote healthy social and moral development by teaching norms needed for survival and interpersonal success (Harper, 2011; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996b). Chronic and intense levels of shame, however, have been implicated in the development and/or maintenance of numerous psychological disorders such as depression and posttraumatic stress disorder (Black, Curran, & Dyer, 2013). Recently, researchers have referred to shame as a silent epidemic, because it impacts everyone but has largely remained invisible in modern societies due to cultural taboo (Brown, 2008; Scheff, 2003). Moreover, it has been argued that because of the intensely painful nature of some shame states, these states are not experienced in consciousness and instead are unconscious (Lewis, 1971). Hence, feelings of shame may not be accessible through self-report measures (Scheff, 2003).

Given the focus on a core aspect of one’s self as defective and worthless during the experience of shame (Lewis, 1971; Tangney, 1992), it is conceivable that the experience of shame, as well as how one copes with and regulates this emotion, has important implications for self-concept and interpersonal relationships. Moreover, it is likely that individual differences would arise in the emotion regulation strategies used to cope with shame. Bowlby (1973) emphasized the importance of attachment for understanding differences in affect regulation strategies. As such, attachment theory provides a salient theoretical framework to understand the development of view of self and interpersonal relationships as well as emotion regulation styles specifically related to shame.
To date, there have been few studies examining trait shame in relation to attachment style, and no studies that document the relationship between state shame or shame coping styles and attachment. Further, despite the clinical importance of shame and the theoretical literature regarding unconscious, or implicit, shame, there exist no published studies that experimentally measure implicit shame. The current study, therefore, will use both direct and indirect measures of shame to assess explicit shame, implicit shame, and shame coping styles, as well as measures of attachment style to explore the relationship between shame and attachment styles.

The following introduction reviews the current shame literature and focuses on the ways in which shame differs from guilt, the negative impact of chronic shame, shame as an interpersonal phenomenon, and the experience of implicit shame. To conclude the section on shame, shame coping styles as defined by the Compass of Shame model are described. Next, because shame is typically elicited in interpersonal situations, a review of attachment theory summarizes child attachment, continuity between child and adult attachment styles, adult attachment, and attachment theory’s conceptualization of emotion regulation. This section concludes with a summary of the differences in emotion regulation based on attachment style. Subsequently, the few studies that examine the relationship between attachment and shame are discussed. Following this discussion that integrates shame and attachment, limitations of the measurement of shame and a review of the Emotional Stroop and shame mood induction procedures (MIP) are provided, which highlight the need to utilize an implicit measure of shame and develop a more effective shame MIP. This chapter concludes with an overview of the limitations of the shame and attachment literature and a description of the purpose of the current study.

Shame
Tangney, Wagner, Hill-Barlow, Marschall, and Gramzow (1996b) define shame as a particularly intense, negative emotion involving feelings of powerlessness, inferiority, self-consciousness, and a strong desire to conceal one’s deficits. Similarly, based on interviews with 215 women, Brown (2006) developed a definition of shame as “the intensely powerful feeling or experience of believing we are flawed and therefore unworthy of acceptance and belonging” (p. 45). Each of these definitions highlight a primary concern associated with the feeling of shame: a belief that one is defective (Greenberg & Goldman, 2008).

Shame consists of emotional, cognitive, and behavioral components. When experiencing feelings of shame, the object of scrutiny and negative evaluation is the entire self, and this experience often is accompanied by a sense of feeling exposed in front of a real or imagined audience, feeling small, and a desire to escape (Tangney, 1993; Wicker, Payne, & Morgan, 1983). Behaviors that typically occur when a person feels ashamed are withdrawal, avoidance of others, and hiding the self (Mills, 2005). Non-verbal signs of shame include hanging the head down, eyes cast downward, and letting hair cover one’s eyes. One may also react defensively when ashamed which may include “frozen face” when the face is kept in tight control, head tilted back with chin jutted out, and one’s lip forming the appearance of a sneer in contempt (Ekman, 1999).

Shame is considered a self-conscious emotion, which is an emotion that involves self-referential processes during which the self is evaluated against some standard (Tangney, 1995). Other self-conscious emotions include embarrassment, guilt, and pride (Mills, 2005). The study of self-conscious emotions is considered to be in its infancy, though shame, in particular, has been neglected in the literature of emotion (Gross & Hansen, 2000; Lewis, 2008; Mills 2005).
Shame deserves further study because it plays a central role in self and social development, and is considered unique from other self-conscious emotions in important ways.

**Distinguishing between Shame and Guilt**

The terms shame and guilt are frequently confused in the literature, which is likely because these emotions share a few important features. Both shame and guilt are considered self-conscious emotions because they involve a self-referential process. Additionally, shame and guilt are considered moral emotions because they are thought to have a role in regulating behavior, and both involve the experience of negative affect (Tangney, 1995).

Despite the presence of negative affect in both shame and guilt, the focus of attention in these emotional states is quite different, resulting in critical distinctions in the thoughts, feelings, and behavioral reactions associated with these emotions (Tangney, 1995; Tangney, Miller, Flicker, & Hill-Barlow, 1996a). Lewis (2008) offers a cognitive-attributional model to understand the differences between shame and guilt. According to this model, each of us develops beliefs about what is acceptable for others and ourselves with regard to our actions, thoughts, and feelings. When an event occurs, attributions about the cause of the event, such as whether the self is responsible (internal attribution) or not responsible (external attribution), must be determined. Once an internal attribution is made, the next step involves the evaluation of one’s actions, thoughts, and feelings against one’s personal standards; a person must determine whether they succeeded or failed in meeting their standards. If it is determined that the person’s action met his or her standards, hubris or pride is experienced, but if a standard is violated, shame or guilt occurs (Lewis, 2008).

In the final step of the cognitive-attributional model, a person makes either a global self-attribution (i.e., entire self) or specific self-attribution (e.g., specific attributes or behaviors).
Based on this model, shame involves an internal evaluation, in which a person fails to meet a standard, and attributes this failure to the whole self. In contrast, the evaluation involving guilt is failure and internal, but the attribution is specific (Lewis, 2008). Shame involves the negative, global evaluation of the self (e.g., I am a mistake), as compared to guilt in which the object of concern is some specific action or failure to act (e.g., I made a mistake; Tangney & Dearing, 2002a).

Despite negative affect experienced with both shame and guilt, the focus of the affect differs, resulting in differing phenomenological experiences. Lewis (1971) concluded that while feeling shame, the whole self, as opposed to some correctable behavior (as with guilt), is experienced as flawed and intolerable. This aspect of Lewis’ conceptualization of shame has been supported empirically (e.g., Tangney et al., 1996a; Tangney et al., 1996b).

In line with this description of shame, a study examining guilt and shame narratives found that individuals consistently described shame as more emotionally painful than guilt (Tangney, 1992). More specifically, during feelings of shame, individuals felt their entire self being painfully scrutinized and negatively evaluated, which led to feelings of worthlessness and powerlessness. When individuals experienced guilt, they tended to feel tense and remorseful about the “bad thing” that was done (Tangney, 1992). The feelings associated with guilt and shame result in different behavioral motivations. For shame, a desire to hide or escape is typically present, whereas feelings of guilt tend to motivate people to want to apologize and repair (Lewis, 1971; Tangney & Dearing, 2002a).

The idea that shame and guilt are distinct emotional experiences is further supported by a number of studies utilizing a variety of different methodologies. Studies using quantitative ratings of shame and guilt experiences (Tangney et al., 1996a), content analyses of shame and
guilt narratives (Tangney, 1992), and qualitative case studies (Lewis, 1971) support this
distinction. In addition, studies examining interpersonal problem solving abilities (Covert,
Tangney, Maddux, & Heleno, 2003) and attachment styles (Akbag & Imamglu, 2010) offer
support for the idea that shame and guilt are distinct emotional experiences.

**Impact of Shame**

Kaufman (1989) described the negative impact of shame on the self, “[shame] is acutely
disturbing to the self. In fact, no other affect is more deeply disturbing. Like a wound made
from the inside by an unseen hand, shame disrupts the natural functioning of the self” (p. 89).
Research has demonstrated that chronic and intense levels of shame contribute to the
development of numerous psychological disorders including anxiety (Harder, Cutler, & Rockert,
1992), depression (Cheung, Gilbert, & Irons, 2004), and self-injurious behavior (Gilbert et al.,
2010). Additionally, data links shame to cortisol reactions and to immune activation, further
supporting the view that shame is a significant psychological stressor, and suggesting that a high
level of shame may be a physical health risk (Dickerson, Kemeny, Aziz, Kim, & Fahey, 2004).
Given shame’s distressing nature and its potential role in mental and physical health, it is
important to gain a clearer understanding of this complex emotion.

**Shame as an Interpersonal Phenomenon**

Experiences of shame typically occur within an interpersonal context when a relational
bond is disrupted (Lewis, 1980; Nathanson, 1987; Scheff, 2003). Developmentally, small doses
of shame contribute to the socialization process (Nathanson, 1987). When a person is alerted to
actions or attributes that might elicit rejection, the person is able to engage in efforts to prevent
possible rejection and maintain social connection. With repeated exposure to interpersonal
rejection, however, a person is likely to experience shame at doses that may be detrimental to one’s psychological health.

Schore (1994; 1996) described the continual experience of misattunement and/or rejection by a caregiver as repeated experiences of unregulated shame. Caregivers have a major role in regulating a child’s emotional state. In order for optimal alertness and positive affect to develop, the caregiver must be able to provide affective communication that is in line with the emotional state of the child (Schore, 1996). For example, if the child is experiencing a non-optimal hyper-aroused state, the caregiver must accurately reflect the child’s experience while balancing the affect by modeling a more optimal response (Schore, 1994). Through this attunement, the child develops the expectation of shared positive affect with the caregiver.

Misattunement, an inaccurate reflection of emotion, violates the child’s expectation of the shared positive affect, which can result in the sudden deflation in positive affect and rapid shift to a negative state, which is referred to as state shame (Schore, 1996). For example, a child might experience this sudden and painful shift in affective states when they are engaged in a pleasurable activity and look to their caregiver anticipating attuned positive mirroring, but instead their caregiver says “no” while displaying a facial expression such as disgust, anger, or fear. In response, the child experiences feelings of shame, and although the child wishes to resume connection with the caregiver, they are unable to regulate the debilitating distress associated with shame independently (Kaufman, 1989). The child needs the caregiver to help them re-establish a positive affective state.

These experiences of shame become mental representations of how to manage intense emotional reactions (Kaufman, 1989). The child’s expectations of connectedness to others are shaped by how the caregiver responds to these emotional experiences. Responsive, attuned repair
to the experience of shame helps the child develop representations that interactions are positive and reparable, others are reliable, and the self is effective in getting needs met (Schore, 1994). In the repeated absence of this type of repair, the child learns that shame states are overwhelming and dysregulating, others are inconsistent and/or unavailable, and they are not able to get their affective needs met (Schore, 1994). An overwhelming sense of defectiveness can arise from chronic misattunement during shame states and as a result, defensive strategies such as contempt, withdrawal, blaming, and denial may allow for the feeling of shame to be consciously avoided or bypassed (Kaufman, 1989; Lewis, 1971).

Implicit, “Bypassed” Shame

It has been argued that many shame states are not experienced in conscious awareness, but instead are unconscious. This phenomenon has been labeled “bypassed shame” (Lewis, 1971; M. Lewis, 1992; Scheff, 2003). Lewis (1971) conducted seminal work on shame by analyzing transcripts of numerous psychotherapy sessions. Lewis was surprised by the amount of shame she discovered that remained unacknowledged by both client and therapist in therapy sessions and coined the term “bypassed shame.” Bypassed shame involves some conscious thought about how one looks to others or that one is inferior, but all that is consciously available may be a “wince,” a “blow,” or a “jolt” (Lewis 1971, p. 197). There is no awareness of the shame affect. On the other hand, explicit shame involves a feeling of being ashamed (Mills, 2005). This awareness can be of one’s autonomic reactions (e.g., rapid heart rate, blushing, sweating) paired with a subjective feeling of feeling small, helpless, and/or unable to control the situation. The acknowledgement of shame may be more challenging for certain people because they consider the experience of shame and related behaviors to be a sign of weakness and/or vulnerability (Lewis, 1971; Scheff & Retzinger, 1991). Individuals who might be particularly prone to
experience shame about shame are those who tend to defend against and avoid painful emotions (Sabag-Cohen, 2009).

Shame often is regulated by avoidance techniques. Feelings of shame frequently result in a desire to hide or escape (Tangney, 1993; Wicker et al., 1983). Moreover, shame often motivates actual withdrawal from a triggering situation (Covert et al., 2003; Tangney et al., 1996a). Individuals commonly repress or deny shame experiences while others may not recognize shame experiences as such (Harder & Lewis, 1987; Lewis, 1971). It is unclear whether individuals’ reports of their own feelings of shame are accurate (Scheff, 2003). There may be a difference in what a person experiences compared to what they report, highlighting the need for the development of an indirect measure of shame. This measure could be utilized to overcome an individual’s defenses and examine implicit shame levels.

Shame Coping Styles

In a review of the developmental literature on shame, Mills (2005) noted the importance of not only understanding trait and state shame, but also identifying ways in which individuals cope with and manage feelings of shame. Additionally, Elison, Pulos, and Lennon (2006b) argue that the experience of shame is not necessarily problematic, but instead it is how one copes with, or defends against shame that may lead to negative outcomes. The Compass of Shame (Nathanson, 1992) is a model of shame coping styles that was developed based on clinical observations. According to this model, constructive shame management occurs when a person attends to the source of shame and decides to address the source. Unfortunately, few people are able to consistently achieve this ideal, and the Compass of Shame model describes four shame coping styles (i.e., poles) people typically engage in to diminish, ignore, or magnify shame without addressing the source of the shame (Elison, Lenon, Pulos, 2006a; Nathanson, 1992). The
poles of the Compass of Shame are: withdrawal, attack self, avoidance, and attack other. Each pole can be viewed on a continuum from mild to severe (Elison, et al., 2006a).

At the withdrawal pole, the shame message is recognized and accepted as valid, and the person attempts leave the situation. The action associated with this pole is to escape or hide to limit feelings of shame (Nathanson, 1992). The attack self pole also involves the person recognizing and accepting the shame message as valid, but unlike withdrawal, the message is amplified by internalizing the feeling of shame (Elison et al., 2006b). Specifically, the person responds with contempt, harsh criticism, and anger directed at the self which intensifies the feelings of shame. The motivation behind this behavior is to engage in self-deprecation to elicit reassuring affirmations from others. A key difference between the withdrawal and attack self poles is that individuals who utilize attack self may endure the feeling of shame to maintain a relationship, whereas individuals who withdraw may sacrifice the relationship by pulling away emotionally from others to reduce the discomfort with the shaming experience (Elison et al., 2006a). Ultimately, with attack self and withdrawal, the self is experienced as damaged or flawed suggesting that these coping styles might be more likely to be utilized by an individual who maintains a negative view of themselves.

At the attack other pole, the shame message may or may not be recognized, likely is not accepted, and to alleviate the potential emotional pain, attempts are made to make someone else feel worse (Nathanson, 1992). The emotion often experienced is anger and it is directed outward, at times at the source of the shaming event (Elison et al., 2006b). This often involves the person verbally or physically attacking someone or something else. The purpose of this response is to defend the vulnerable self against messages of worthlessness or inadequacy associated with the
experience of shame, bolster one’s self-image, and externalize the shame by projecting its impact onto others (e.g., demeaning or blaming others) (Elison et al., 2006a).

The avoidance pole also involves the person likely failing to recognize the shame message or not accepting the message, and attempts are made to distract, dissociate, or disconnect the self and others from the feeling of shame (Nathanson, 1992). The purpose of this reaction is to minimize awareness of the shame or to dismiss the shaming experience as unimportant. It is designed to prevent the conscious experience of shame and is believed to operate outside of a person’s awareness (Elison et al., 2006b). Both attack other and avoidance involve the limited awareness of shame suggesting that they may be utilized more often by individuals who tend to inhibit emotions that are associated with feeling vulnerable, such as shame.

The four strategies identified in the Compass of Shame model are not necessarily used independent of each other. An individual might utilize features of multiple poles simultaneously (e.g., attack self and withdrawal) to defend against feelings of shame (Nathanson, 1992). It is important to note, however, that a common characteristic of each of these strategies is that they fail to promote successful processing of emotion. Specifically, when these strategies are used chronically, their use prevents an individual from resolving core issues and increases their difficulty developing positive, accurate perceptions of the self that might aid them in adaptively coping with shame (Elison et al., 2006b).

Attachment Theory

Shame has been described as the “attachment emotion” (Lewis, 1980), and as the “primary social emotion” (Scheff, 1988), suggesting that shame helps individuals maintain interpersonal connection. Frequent experiences of misattunement by a caregiver results in repeated experiences of unregulated shame, which shape an individual’s intrapersonal and
interpersonal expectations (Schore, 1994; 1996). Similarly, attachment theory emphasizes the role of the primary caregiver’s pattern of responsiveness in shaping a child’s beliefs about the self and others (Bowlby, 1982), though at this time, little research exists directly examining the relationship between shame and the attachment process.

Bowlby (1982) posited that infants are born with the attachment behavioral system, an innate psychobiological system, which motivates them to seek proximity to attachment figures in times of distress and explore their environment when they feel secure. Based on an evolutionary perspective, the act of seeking a caregiver when distressed or in danger is adaptive because it protects the child. Further, this desire to seek proximity is not believed to be solely due to the provision of food, but instead is related to an innate desire to be comforted by and in close proximity to a caregiver (Harlow, 1962).

Beginning at birth, an infant engages in behavioral strategies, such as crying, that result in a caregiver moving towards the infant and meeting the infant’s basic needs. These behavioral strategies evolve into other communication methods as time progresses and development occurs. The pattern of responsiveness by the primary caregiver to a child’s emotional signals results in the development of an internal working model (Bowlby, 1982). Internal working models are cognitive-affective schemas that are composed of representations of the self, other, and the relationship interaction pattern (Ainsworth, 1989). When the caregiver’s pattern of responsiveness is sensitive and consistent, the child develops the expectation that their needs will be met, resulting in a secure working model in which the child feels loved and valued and trusts that others are loving and reliable (Bowlby, 1982). In contrast, if a caregiver’s pattern of responsiveness is inconsistent or dismissing of the child’s needs, feelings of self-worth do not
develop, and the infant’s expectations of others may be altered, leading to an insecure internal working model.

Attachment styles result from a process of the individual internalizing a specific history of attachment experiences, which creates a systematic pattern of relational expectations, emotions, and behaviors (Fraley & Shaver, 2000). Ainsworth and Bell (1970) developed the Strange Situation to examine and categorize infant attachment behavior. During the Strange Situation, an infant is separated from their parent while being exposed to a stranger, and then is subsequently reunited with their parent. This methodology is designed to activate the infant’s attachment behavioral system (e.g., proximity seeking behavior; Ainsworth, Blehar, Waters, & Wall, 1978). Originally three infant attachment patterns (i.e., secure, anxious-resistant, and anxious-avoidant) were identified using the Strange Situation. Later, an additional category, disorganized, was added to classify children who utilized an inconsistent and ineffective combination of insecure attachment behaviors (Main & Soloman, 1990).

Each attachment pattern is associated with particular behaviors during the Strange Situation. Children with a secure attachment pattern tend to use the caregiver as a secure base from which to explore their environment and return to when distressed (Ainsworth et al., 1978). In comparison, children classified as ambivalent tend to be overly anxious about their caregiver’s availability and responsiveness because of their caregiver’s chronically inconsistent care (e.g. responding to infant’s needs only when it is convenient), resulting in the child experiencing difficulty using the caregiver as a secure base. Consequently, these children tend to display clingy and resistant behavior more often than children categorized as secure (Ainsworth et al., 1978).
On the other hand, children with an avoidant attachment pattern appear to be unaffected by the presence or absence of their caregiver, often exploring readily and ignoring the return of their caregiver after a separation. Compared to children evidencing a secure attachment, children with an avoidant attachment display less proximity seeking and separation distress (Ainsworth et al., 1978). An avoidant pattern develops from a caregiver that is consistently emotionally unavailable and exhibits subtly rejecting and rigid behaviors (e.g., not wanting infant to interrupt activities). Unlike the other three attachment classifications, children in the disorganized classification do not appear to have a coherent behavioral response, and instead, oscillate between avoidant and ambivalent behaviors (Ainsworth et al., 1978). The disorganized pattern results from the infant experiencing their caregiver as frightening (Main & Hesse, 1990). As a result, their attachment system is activated, causing them to seek comfort and safety from the person that they fear.

**Continuity between Child and Adult Attachment**

The development of attachment patterns in childhood tends to influence attachment patterns and behaviors in adulthood (Feeney, 2008; Fraley, 2002). This assertion is supported by longitudinal data, which provide evidence that internal working models developed in childhood typically persist into adulthood (Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Hamilton (2000) found that the stability of secure versus insecure attachment style was 77% from infancy to adolescence. Further, 72% of infants who were seen in the Ainsworth Strange Situation at 12 months of age received the same secure versus insecure attachment classification 20 years later as measured by the Adult Attachment Interview (AAI; Waters et al., 2000).
Despite the tendency for internal working models to remain consistent from childhood to adulthood, these models can adapt and change in response to new relationships, or the removal or addition of stressors. Negative life events such as loss of a parent, parental divorce, and physical or sexual abuse by a family member have been implicated in change in attachment classification (Waters et al., 2000). For example, in a sample of 59 young adults (18 to 19 years old) the majority of which grew up in families characterized by high levels of stress and instability and low levels of social support, 22 of the participants transitioned from “infant secure to adult insecure” classification (Weinfield, Sroufe, & Byron, 2000). One factor that differentiated the groups was the “infant secure to adult insecure” group had mothers who were significantly more depressed than the mothers of the “infant secure to adult secure” group. In contrast, earned-security occurs when an individual shifts from insecure to secure classification (Pearson, Cohn, Cowan, & Cowan, 1994). Often, earned-security results from the development of a secure relationship with a friend, romantic partner, or therapist; however, these relationships typically take an extended period of time (i.e., up to two years) to modify an individual’s internal working model (Obegi, 2008; Pearson et al., 1994; Cohn, Cowan, & Cowan, 1994).

**Adult Attachment**

As an individual reaches adulthood, the primary attachment bond shifts from parent to peers, often a romantic partner (Feeney, 2008). Two lines of adult attachment research exist: the first examines adult attachment to a childhood caregiver and the second examines adult romantic attachment. Despite conceptual and methodological differences, both fields of study describe adult attachment styles that correspond to the infant attachment classifications identified in the Strange Situation (Riggs et al., 2007).
The first area of adult attachment research emerged from the field of developmental psychology and focuses on adult’s mental representations of early childhood interactions with parents as assessed by the Adult Attachment Interview (AAI; Main & Goldwyn, 1985). The AAI is a semi-structured interview utilized to categorize attachment states of mind based on an individual’s ability to discuss their experiences openly in a collaborative, balanced, and highly coherent manner. Interview transcripts are classified into one of four attachment categories: secure/autonomous, preoccupied, dismissing, and unresolved/disorganized (Main & Goldwyn, 1985).

The second line of adult attachment research emerged from the field of social/personality psychology; it is based on romantic attachment and will be the focus of the current study. Similar to parent-child conceptualizations of attachment, romantic attachment involves a specific attachment figure, secure base, proximity seeking, safe haven, and distress when an individual is involuntarily separated from an attachment figure (Feeney, 2008). Unlike parent-child attachment, however, adult romantic relationships involve two behavioral systems in addition to attachment- caregiving and sexual mating- which typically involve reciprocity between partners (Bowlby, 1973). The caregiving system is characterized by mutual protective and caring behaviors, while the mating system is characterized by sexual and reproductive behaviors (Bowlby, 1973; Zeifman & Hazan, 2008).

Adult romantic attachment is assessed by self-report of conscious memories and views of romantic relationships, and is commonly scored on the dimensions of anxiety (i.e., anxiety about relationship issues) and avoidance (i.e., discomfort with closeness and interdependence) (Bartholomew & Shaver, 1998). These dimensions generally represent distinct behavioral
strategies in close relationships. Similar to parent-child attachment, distress increases the strength of the attachment anxiety or avoidance tendencies.

Despite some researcher’s arguments for the use of only the dimensional model (e.g., Fraley & Spieker, 2003), many adult romantic attachment researchers use a four-category model that corresponds to Ainsworth’s infant attachment patterns: secure (secure), dismissing (avoidant), preoccupied (ambivalent-resistant), and fearful (disorganized). The four attachment categories can be described as follows: (a) individuals with a secure attachment evidence a positive view of self and other, which maintains behavioral strategies indicative of low attachment anxiety and avoidance; (b) individuals with a preoccupied attachment evidence a negative view of self and positive view of other, which maintains high attachment anxiety and low avoidance; (c) individuals with a dismissive attachment evidence a positive view of self and negative view of other, which maintains low attachment anxiety and high avoidance; and (d) individuals with a fearful attachment evidence a negative view of self and other, which maintains high attachment anxiety and avoidance (Brennan et al., 1998).

*Attachment and Emotion Regulation*

Attachment theory is one of the major conceptual frameworks for understanding emotion regulation. From this perspective, each attachment style is associated with different interpersonal behaviors, which are connected to emotion regulation strategies (Bowlby, 1982). A stable, supportive attachment figure creates a heightened sense of attachment security and increases a person’s confidence in support seeking as an affect regulation strategy. This pattern of direct security seeking is viewed as the primary attachment strategy (Bowlby, 1973). When attachment figures fail to be consistently available and supportive, proximity to one’s attachment figure fails to alleviate distress and secondary attachment strategies develop (Cassidy & Kobak, 1988).
Secondary attachment strategies include hyperactivation and deactivation. Hyperactivating strategies develop when the attachment figure is perceived as inconsistently available. Despite this inconsistency, the individual continues to appraise proximity seeking as viable or even essential. As a result, the individual may react with emotional intensity in an attempt to attain proximity, and support (Cassidy & Kobak, 1988). These attempts may include clingy, controlling, or even coercive behavior (Shaver & Mikulincer, 2002). Additionally, individuals who rely on hyperactivating strategies tend to perceive themselves as incompetent and helpless at affect regulation (Shaver & Mikulincer, 2002).

In contrast, deactivating strategies emerge when a person perceives proximity seeking as unlikely to relieve emotional distress (Cassidy & Kobak, 1988). Consequently, a person avoids seeking support, and high levels of effort are directed at managing and coping with distress alone. The goal of this strategy is to deactivate the attachment system so the person is able to avoid feelings of frustration and further distress triggered by the attachment figure’s lack of availability. People who rely on these strategies tend to compulsively deny attachment needs and avoid emotional involvement, dependence, and intimacy in relationships (Mikulincer & Shaver, 2003). Maintenance of a self-reliant attitude that reduces a person’s dependence on others further reinforces these actions.

Attachment styles have been linked to different patterns of emotion regulation (Shaver & Mikulincer, 2009). Individuals with a secure attachment style tend to demonstrate an open, flexible style of emotion regulation in which a variety of emotions are experienced and expressed (Shaver & Mikulincer, 2002). In contrast, individuals with an insecure attachment style tend to exhibit a narrower range of emotions, which are consistently biased by defensive hyperactivation.
or deactivation strategies characteristic of that particular attachment style. In the next sections, patterns of emotional regulation will be reviewed in accordance with each attachment style.

Secure attachment style. Individuals evidencing a secure attachment pattern (low anxiety and low avoidance) tend to use emotion regulation strategies that are designed to alleviate distress while maintaining supportive, comfortable relationships and increasing personal adjustment through flexible, reality-attuned coping (Shaver & Mikulincer, 2002). When regulating emotion, a sense of attachment security sustains problem-solving efforts and reappraisal attempts. More specifically, individuals with a secure attachment style are able to generate problem-solving strategies (e.g., analyze situations), in addition to utilizing social support to assist in problem solving (e.g., by seeking advice) or sustaining motivation by offering support and affirmations (Shaver & Mikulincer, 2009).

Individuals with a secure attachment style also tend to reappraise events in relatively benign terms, maintain an optimistic sense of self-efficacy, and attribute undesirable events to controllable, temporary, or context-dependent causes (Mikulincer & Shaver, 2003). Because of these strategies, regulation typically does not involve avoidance or denial of emotions (Cassidy, 1994). Instead, adults with a secure attachment pattern are generally able to openly experience and express their emotions accurately and honestly (Shaver & Mikulincer, 2009). Therefore, hyperactivation or deactivation strategies are rarely necessary for those with a secure attachment style.

Preoccupied attachment style. Individuals with a preoccupied attachment style (high anxiety, low avoidance) tend to perceive negative emotions such as sadness, anger, and anxiety as congruent with their attachment goals (e.g., expression of these emotions is expected to elicit proximity and sensitivity from the caregiver; Cassidy & Kobak, 1988). As a result, these
negative emotions tend to be sustained or even exaggerated by individuals evidencing a preoccupied attachment, demonstrating a hyperactivation strategy of emotional regulation (Mikulincer & Shaver, 2003).

The development of this style stems from the unfulfilled desire to cause one’s caregivers to pay more attention and provide protection and support that is more reliable (Cassidy & Kobak, 1988; Mikulincer & Shaver, 2003). This hyperactivating strategy of emotional regulation is sustained in a number of ways. For example, individuals with a preoccupied attachment may heighten the threatening aspects of events, maintain negative beliefs about one’s ability to manage distress, and/or attribute threat-related events to uncontrollable causes and global personal inadequacies (Mikulincer & Shaver, 2003). This tendency to regulate emotion with a negative, global evaluation may increase a person’s shame-proneness as it fits closely with cognitive-attributional model’s (Lewis, 2008) description of shame (i.e., negative, internal, global evaluation of the self). Therefore, those with a preoccupied attachment style may be vulnerable to experiencing shame due to a negative evaluation of the self.

*Fearful attachment style.* Individuals with a fearful attachment style score high on both attachment anxiety and avoidance (Brennan et al., 1998). Two explanations are proposed regarding the development of a fearful attachment style. One way to conceptualize the development of this attachment style is to view individuals with a fearful attachment style as initially evidencing a dismissive attachment style, but their typical deactivating defenses collapsed or are only partially operational (Simpson & Rholes, 2002). The second way to conceptualize the development of a fearful attachment style is an extension of the disorganized attachment pattern observed with infants. Specifically, an infant views their attachment figure as
frightening, but because their fear activates their attachment system, they seek proximity and support from the source of their fear, their caregiver (Main & Hesse, 1990).

Simpson and Rholes (2002) suggest that the empirical evidence favors the second conceptualization, the fearful attachment style in adulthood is an extension of the disorganized attachment pattern for infants. Unlike adults evidencing the other insecure attachment styles, individuals with a fearful attachment style do not display a coherent strategy of emotion regulation. Instead, these individuals tend to enact both hyperactivation and deactivation strategies in a confusing and chaotic way. Individuals with a fearful attachment style tend to engage in a blend of approach and avoidance behaviors combined with paralyzed inaction when trying to regulate their affect, which often results in worse emotional adjustment compared to individuals with the other insecure attachment styles (Simpson & Rholes, 2002).

**Dismissive attachment style.** Individuals with a dismissive attachment style (low anxiety, high avoidance) tend to utilize deactivating strategies to regulate affect. Due to the relevance of deactivation strategies and shame, a more comprehensive review of these strategies will be provided. Deactivation strategies are aimed at minimizing the appraised magnitude of threats and experiences of distress, which, if acknowledged, might reactivate painful, unmet needs for proximity and security (Cassidy & Kobak, 1988).

The first goal of this strategy is to deactivate the attachment system; therefore, individuals with a dismissive attachment style attempt to inhibit any emotion state that might be associated with a threat to attachment figure availability (e.g., rejection, betrayal, separation) or feelings of vulnerability, regardless of the deleterious effect (Mikulincer & Shaver, 2003). The inhibition of emotions mainly pertains to emotions such as fear, anxiety, anger, sadness, shame, guilt, and distress. More specifically, anger may be inhibited because it implies emotional
investment and involvement in a relationship, which does not fit with a dismissive person’s desire for interpersonal distance (Cassidy, 1994). Additionally, fear, anxiety, sadness, shame, and guilt are viewed as signs of weakness or vulnerability, thus challenging a dismissive person’s desire for self-reliance. The second goal of this strategy is to maintain a positive self-image by facilitating access to positive self-representations and blocking access to negative self-representations (Mikulincer, 1998a).

The goal of deactivation is accomplished in a number of ways. People evidencing a dismissive attachment pattern can keep their attachment system deactivated through cognitively distancing from threats (Mikulincer, Florian, & Weller, 1993), or suppressing distressing experiences such as rejection, separation, or loss (Fraley & Shaver, 1997; Mikulincer, Dolev, & Shaver, 2004). Moreover, deactivation may be maintained by repressing painful memories (Mikulincer & Orbach, 1995), and diverting attention away from attachment-related threats (Fraley, Garner, & Shaver, 2000).

The effectiveness of deactivation when under stress is one of the more controversial issues in the attachment literature (Mikulincer et al., 2004). One deactivating defense that is commonly used by individuals with a dismissive attachment style is suppression, which involves consciously or unconsciously repressing the experience of particular thoughts or emotions (Wenzlaff & Wegner, 2000). Fraley and Shaver (1997) examined whether avoidant deactivating defenses are capable of preventing the typical post-suppression rebound effect. The post-suppression rebound effect is defined as the increased intrusion into consciousness of unwanted thoughts following suppression of these thoughts (Wegner, Schneider, Carter, & White, 1987). Participants were asked to suppress thoughts about a painful breakup and then complete a stream of consciousness task (Fraley & Shaver, 1997). Researchers assessed rebound of the previously
suppressed thoughts and participants’ physiological arousal. The study found that the deactivating defenses of participants with a dismissive attachment style (high avoidance, low anxiety) were effective in blocking unwanted conscious thoughts and preventing emotional arousal; attachment avoidance was associated with a weaker rebound effect and lower skin conductance (Fraley & Shaver, 1997). These findings are limited in that the study only examined conscious activation of separation-related thoughts as opposed to implicit activation. Moreover, the study was conducted under low stress conditions, and therefore, fails to address the question of whether deactivation strategies are able to remain effective under stress.

Mikulincer et al., (2004) extended the findings of Fraley and Shaver (1997) by examining the use of suppression with thoughts of loss under low and high cognitive load (i.e., low and high stress conditions) and examined the implicit activation of these suppressed thoughts using an Emotional Stroop task. The Emotional Stroop is a modified version of the Stroop color-naming task (Stroop, 1935), and assesses implicit activation by documenting interference with color naming responses during the Stroop task (MacLeod, 1991). Individuals were assessed for attachment style and randomly assigned to a high or low stress condition. One group was instructed to suppress thoughts of a recent loss and the other group was given no instruction regarding suppression, but still asked to recall the loss of a relationship. The researchers also examined the effect of suppression on an individual’s self-representation.

The study provided support for the findings of Fraley and Shaver (1997) such that individuals high on attachment avoidance were able to suppress thoughts of separation in the low cognitive load condition. Once a more demanding cognitive task was introduced, however, the effectiveness of the deactivating strategy was impaired and thoughts of loss could not be suppressed (Mikulincer et al., 2004). Furthermore, this collapse of the avoidant defenses under
high cognitive load was associated with heightened accessibility to negative self-traits and reduced accessibility to positive self-traits. Interestingly, individuals scoring high on avoidance engaged in suppression whether the researchers instructed them to suppress or not (Mikulincer et al., 2004), suggesting that individuals high on avoidance engage in suppression automatically.

Despite individuals with a dismissive attachment style reporting adequate levels of psychological functioning and wellbeing, this level of functioning is unlikely to persist during stressful situations due to the breakdown of their defenses (Mikulincer et al., 2004). It is likely that under these circumstances, the avoidant defenses are impaired and the resurgence of suppressed and troubling experience occurs. Moreover, these defenses appear to be highly effective under low stress, but they seem to fail when the need for emotion regulation is at its highest, leaving individuals with a dismissive attachment style vulnerable to the spread of painful emotion and thoughts when their psychological resources are taxed (Mikulincer et al., 2004).

Deactivation strategies have been studied with experiences of loss and rejection, but have not been examined with other concerns and emotional experiences. It is important to understand the degree to which individuals with a dismissive attachment style utilize deactivating strategies, such as suppression, to cope with other distressing experiences (Mikulincer et al., 2004). Shame is a painful emotion that is associated with deep feelings of vulnerability (Brown, 2006), and therefore, would likely be suppressed by individuals with a dismissive attachment style. Consequently, these individuals accounts of feelings of shame are likely to be inaccurate, and an indirect measure of shame is needed in order to circumvent the defenses of the dismissive attachment style to more accurately examine these individuals’ experiences of shame. The next section will review the research on shame and attachment styles and discuss the findings of the only study that attempted to utilize the Emotional Stroop task to assess implicit shame.
Shame and Attachment

Bowlby (1973) proposed that powerful emotions, both negative and positive, are products of attachment relationships. Despite shame occurring when interpersonal connection is disrupted, there are few empirical studies that examine the relationship between shame and attachment. Findings of available studies are mixed regarding adult romantic attachment and self-reported shame. More specifically, participants with a secure or fearful attachment style demonstrated consistent relationships with self-reported shame across studies, but the relationship between participants with a preoccupied or dismissive attachment style and self-reported shame are inconsistent. In two samples of undergraduate students, the secure and dismissive attachment style were significantly negatively correlated with levels of self-reported trait shame (Akbag & Imamoglu, 2010; Lopez et al., 1997). Findings were mixed regarding students with a preoccupied attachment style. Individuals with a preoccupied attachment style scored significantly higher on a self-report measure of shame-proneness compared to individuals with a dismissive or secure attachment style (Lopez et al., 1997). In contrast, the preoccupied attachment style was not correlated with self-reported trait shame among Turkish undergraduates (Akbag & Imamoglu, 2010).

Mikulincer and Shaver (2005) examined attachment style differences in emotional reactions to one’s destructive behavior toward a romantic partner in a sample of undergraduate students (N = 65, no age reported). Individuals were asked to recall and write about an episode in which they hurt their romantic partner or failed to meet their partner’s needs. After writing they rated the extent to which the episode caused them to feel guilty, ashamed, or hostile toward their partner. High levels of attachment anxiety were positively associated with shame and negatively associated with guilt, whereas attachment avoidance was positively associated with hostility.
toward their partner and negatively associated with shame and guilt (Mikulincer & Shaver, 2005). These results suggest that individuals high on attachment avoidance are more likely to report hostility in response to hurting their partner or failing to meet an expectation in their romantic relationship as opposed to guilt or shame.

Gross and Hansen (2000) also investigated the relationship between attachment style and self-reported shame. Specifically, attachment style, self-reported shame, and investment in relatedness were examined in a sample of college students ($n = 204$, $M_{age} = 22.90$ years, $SD = 8.40$). Self-reported trait shame was negatively correlated with the secure attachment style and positively correlated with the preoccupied and fearful attachment styles. Overall, these findings are consistent with the other research on attachment styles and shame, as well as attachment theory; in that preoccupied and fearful attachment styles are comprised of a negative sense of a self, a quality expected with higher levels of self-reported shame. Moreover, secure and preoccupied individuals are both motivated to maintain strong attachment bonds and seek interdependence and emotional involvement, but they differ in their sense of self-worth, which explains the tendency of individuals with a preoccupied attachment style to respond to situations more often with feelings of shame than secure individuals (Mikulincer & Shaver, 2003).

In contrast to the previously mentioned studies, Gross and Hansen (2000) found no relationship between self-reported trait shame and dismissive attachment style. One explanation for this finding is that despite both individuals with a secure or dismissive attachment style having a working model composed of a positive view of self, this positive perception might be more fragile and guarded for individuals with a dismissive attachment style. “[Individuals with dismissive attachment styles’] negative other stance may develop out of self-protection, belying a pseudo-positive sense of self… outwardly dismissing individuals would consciously report low
shame while internally distrusting their own worthiness” (Gross & Hansen, 2000, p. 904). These results emphasize the potential role of deactivation strategies in coping with an emotion such as shame because of the associated feelings of vulnerability and weakness, thus highlighting the importance of utilizing an indirect measure of shame.

Upon close examination of the literature, only one study was found that utilized a measure that could potentially assess implicit shame. Sabag-Cohen (2009) conducted a study with a combined community and college student sample ($n = 103$, $M_{age} = 26.47$ years, $SD = 4.93$), which examined the relationship between implicit and explicit shame, attachment styles, and interpersonal rejection. An Emotional Stroop task was designed for the study as an indirect measure of shame, and a rejection mood induction procedure was created to elicit feelings of shame. Results revealed significantly higher levels of trait shame for individuals with a fearful attachment style compared to those with a secure, preoccupied, or dismissive style. Further, individuals with a fearful attachment style demonstrated a larger change across the mood induction procedure in state shame compared to individuals with a dismissive or secure attachment style. Due to problems with the Emotional Stroop task (e.g., a learning effect occurred due to a short interval between administration times) and the MIP (e.g., scenario was not potent enough to trigger a long-lasting effect) the study was unable to effectively examine implicit shame. The next section will outline the methodological issues in the field of shame, the use of the Emotional Stroop task as an implicit measure of shame, and an expressive writing task to induce feelings of shame.

Methodological Issues in the Measurement of Shame

A number of methodological issues in studies examining shame have been raised in the literature (e.g., Black, Curran, & Dyer, 2013; Luyten, Fontaine, & Corveleyn, 2002). One major
shortcoming in the literature is a limited examination of responses to shame experiences. The literature typically assesses the degree to which shame is experienced, but fails to consider how individuals respond to and manage the affective experience of shame (Luyten et al., 2002). There is a significant lack of understanding of the way in which individuals cope with feelings of shame. Including a measure regarding shame coping strategies is a necessary step towards improving shame research methodology.

Additionally, research has been hindered by problems in the assessment of shame. First, many studies have used only a single measure of shame, as opposed to assessing trait and state shame, and have failed to consider how state and trait shame might differ and/or impact each other (Luyten et al., 2002). Second, shame has typically been measured using only self-report (e.g., adjective lists, statements, scenario-based) despite self-report having a number of limitations. Self-report measures typically require a person to be willing to disclose their emotions, be aware of their emotions, and distinguish between different yet similar emotional experiences (e.g., shame and guilt), but research suggests that it is common for these three assumptions not to be met (Robins, Noftle, & Tracy, 2007). For instance, people may be reluctant to discuss experiences involving shame except under specific conditions (e.g., environment separate from participants everyday life, participants are reminded that they will not be forced to disclose any particular situation) (MacDonald, 1998). In addition, lay people typically experience difficulty differentiating between similar emotions such as, shame and guilt (Tangney & Dearing, 2002a). Also, emotions are often experienced implicitly (Mikulincer & Shaver, 2005). Specifically, shame has been described as a bypassed emotion; therefore, measuring shame through only self-report is unlikely to tap into implicit shame (Harder &
Lewis, 1987). The use of both explicit and implicit measures will potentially address these issues.

Based on the limitations of self-report measures it is important to utilize an implicit measure in conjunction with self-report. A single study was identified that attempted to measure implicit shame. Sabag-Cohen (2009) designed an Emotional Stroop task to measure implicit shame. Interference with color naming responses in the Stroop task indicate the implicit accessibility of particular thoughts or emotions, and the Emotional Stroop has been widely used to indirectly measure emotion and the role of emotion in cognitive interference (MacLeod, 1991). Details about the development of the Emotion Stroop task for shame are provided in the method section. As described previously, Sabag-Cohen (2009) noted problems with the administration of the Emotional Stroop, which prevented accurate measurement of implicit shame.

Similarly, there exists no well-validated MIP to induce feelings of shame. Upon close examination of the literature only two shame MIPs were found. Sabag-Cohen (2009) created a shame MIP that involved participants listening to a rejection scenario, but the MIP was not potent enough to trigger a strong and lasting feeling of shame. One reason Sabag-Cohen hypothesized that the MIP was less effective was that it was not perceived to be relevant to the participants’ life experiences. This fits with the finding that shame is not produced by a single, specific situation; instead it is based on an individual’s interpretation of an event (Lewis, 2008). Thus, Sabag-Cohen recommended the development of an alternative shame MIP.

In contrast, De Hooge, Breugelmans, and Zeelenberg (2008) successfully induced feelings of shame in participants using a writing task. The participants wrote about experiences such as failing an exam or behaving inappropriately while intoxicated, and the manipulation
check demonstrated that participants showed an increase in all of the basic elements of shame (e.g., feeling alone, attention focused on them, worried about what others might think about them) post-MIP. These findings fit with the extensive literature that documents the benefits of an expressive writing task (e.g., Frattaroli, 2006; Smyth, 1998), despite the induction of heightened negative emotion during and immediately following the expressive writing task (Pennebaker, 2000; Smyth, 1998). Further, an expressive writing task addresses the issue that shame is not triggered by a single event because it provides the individual the opportunity to select a situation in which they experienced shame as opposed to assuming individuals feel ashamed about the same experiences. Thus, an expressive writing task was designed for the current study and details of the development of the task are provided in the method section. The current study aims to address the limitations of previous research by using an Emotional Stroop task to assess implicit shame and an expressive writing task for a shame MIP. Furthermore, a measure of shame coping styles will be utilized to assess individuals’ responses to shame-inducing events.

Summary of Limitations of the Current Literature

Although shame has been associated with several aspects of poor psychological functioning (Cheung et al., 2004; Gilbert et al., 2010), the study of shame has been neglected in the literature (Lewis, 2008; Mills 2005). Further, conclusions regarding shame and attachment style are tempered by significant limitations to the investigations completed (Robins et al., 2007, Noftle, & Tracy, 2007). In order to more systematically describe the relationship between attachment style and shame it is important to conduct more research in this area as well as address the previous study’s limitations.

Shame typically is assessed as state or trait by a single self-report measure, which fails to consider the relationship between state and trait shame and how these two constructs might differ
(Luyten et al., 2002) as well as the experience of implicit or unconscious shame (Harder & Lewis, 1987). Furthermore, based on individuals with different attachment styles’ typical patterns of emotional regulation, it is expected that they might differ on their levels of self-reported and implicit shame. More specifically, given the emotion regulation style of individuals high on avoidance, it is expected that their tendency to suppress and detach from distressing experiences such as loss and separation would be prominent with shame as well because of the feelings of inferiority and powerlessness that are often associated with shame (Sabag-Cohen, 2009). These feelings directly contradict the positive self-image and self-reliant attitude of adults evidencing a dismissive attachment style. Consequently, these individuals would most likely be unaware of shame affect and would not report it explicitly, despite its presence (Sabag-Cohen, 2009).

The research specifically examining the relationship between attachment style and implicit versus explicit shame is limited. That is, only a single study utilized an implicit measure of shame to examine differences in shame by attachment style, but methodological issues prevented the effective measurement of implicit shame. Moreover, studies using self-report measures of shame report contradictory findings particularly in relation to individuals with a dismissive attachment. With regard to responses to shame, researchers have suggested the importance of understanding how an individual copes with shame, but the majority of the research has been conducted on the degree to which shame is experienced (Luyten et al., 2002; Tangney & Dearing, 2002a). Further, although attachment styles and shame coping styles are theoretically complementary constructs, no study was found that examined this relationship.

Purpose of the Current Study
The purpose of the current study was to address limitations in the literature with the aim of examining implicit and explicit shame, responses to shame, and attachment styles. Specifically, the current study included measures of state and trait shame and shame coping styles. Additionally, a mood induction procedure was used to elicit feelings of shame and the Emotional Stroop task was used as a measure of implicit shame. This methodology provided a basis to examine differences by attachment style in implicit and explicit shame and shame coping styles at baseline and following a shame MIP.

Attachment Styles and Shame Hypotheses

Hypothesis 1
At baseline, individuals with a dismissive or secure attachment style will exhibit lower shame (i.e., state, trait, implicit) than individuals with a preoccupied or fearful attachment style, and individuals with a preoccupied attachment style will exhibit lower shame compared to individuals with a fearful attachment style.

Hypothesis 2
From baseline to post-MIP, individuals with a preoccupied or fearful attachment style will show significant changes in state shame, while state shame will remain stable for individuals with a dismissive or secure attachment style. Post-MIP, individuals with a secure or dismissive attachment style will report significantly less state shame compared to individuals with a preoccupied or fearful attachment style.

Hypothesis 3
Trait shame will remain stable from baseline to post-MIP for each attachment style classification.

Hypothesis 4
From baseline to post-MIP, individuals with a preoccupied, fearful, or dismissive attachment style will exhibit significant changes in implicit shame, while implicit shame will remain stable for individuals with a secure attachment style. Post-MIP, individuals with a secure attachment style will exhibit significantly lower implicit shame compared to individuals with an insecure attachment style (i.e., preoccupied, fearful, or dismissive), and individuals with a fearful attachment will exhibit significantly higher implicit shame than individuals with a preoccupied or dismissive attachment.

Attachment Styles and Shame Coping Styles Hypotheses

Hypothesis 5

Individuals with different adult attachment styles will differ in their use of the four shame coping styles.

a. Students with a preoccupied or fearful attachment style will score higher on the Attack Self shame coping style subscale compared to students with a dismissive or secure attachment.

b. Students with a dismissive or fearful attachment style will score higher on the Attack Other subscale than students with a preoccupied or secure attachment style, and students with a preoccupied attachment will score higher compared to students with a secure attachment.

c. Students with a preoccupied or fearful attachment style will score higher on the Withdrawal subscale than those with a dismissive and secure attachment style, and students evidencing a dismissive attachment pattern will score higher on the Withdrawal subscale than students evidencing a secure attachment pattern.

d. Students displaying a dismissive or fearful attachment will score higher on the Avoidance
subscale compared to students displaying a preoccupied or secure attachment.

CHAPTER 2

METHOD

Participants

Participants were recruited from a four-year university located in the southern part of the United States. Participants were provided extra credit in exchange for completing the study. Three hundred and three participants were run in the laboratory, 32 of the participants were excluded from all data analyses due to data collection issues. Specifically, color-blindness was detected in three of the potential participants, 28 participants were excluded due to computer program malfunctioning or issues with data collection (e.g., research assistant failed to correctly label Emotional Stroop task data resulting in lost data), and one participant discontinued the study prematurely due to feeling emotionally upset by the writing task. Finally, six additional participants were excluded from all analyses because their MIP written response were coded as not including the emotion shame, and the objective of the study was to induce feelings of shame during the MIP.

The final sample included 265 participants whose ages ranged from 18 to 48 years old ($M = 20.05, SD = 3.05$; Tables 1 and 2). In terms of gender, 196 participants identified as female (74.0%), 65 identified as male (24.5%), and 4 identified as transgender (1.5%). Due to small cell size, the four individuals who identified as transgender were excluded from Table 1, which displays the Chi-squares tests of independence for the descriptive variables. The race/ethnicity of the sample was: 18.1% African American/Black ($n = 48$), 43.8% European American/White ($n = 116$), 24.9% Latino/Hispanic ($n = 66$), and 13.2% “Other” ($n = 35$). Due to small cell size, participants who endorsed Native American ($n = 2$), Asian American ($n = 18$), and “Other” ($n = 34$)
14) were combined in the ‘Other’ category for race/ethnicity in Table 1. Participants who identified as bisexual (n = 12), gay or lesbian (n = 13), or questioning (n = 5) were collapsed into a sexual minority category given the small sizes. In terms of the broader categories for sexual orientation, 88.7% of the sample identified as heterosexual or straight (n = 235) and 11% identified as a sexual minority (n = 30).

With regard to relationship status, 41.1% were single or separated (n = 109), 48.3% were dating (n = 128), and 10.6% were living together or married (n = 28). The sample’s average number of significant romantic relationships ranged from 0 to 8 (M = 1.89, SD = 1.39). The therapy attendance breakdown of the sample was 43.4% of participants currently attending therapy or attending therapy in the past (n = 115) and 56.6% of the sample never attending therapy (n = 150). The sample was approximately 39.2% freshmen (n = 104), 23.8% sophomores (n = 63), 21.1% juniors (n = 56), and 15.8% seniors (n = 42). The range of GPAs for the sample was 1.80 to 4.00 (M = 3.20, SD = .52). Tables 1 and 2 provide the breakdown of demographic variables by attachment style.

Measures

The Experiences in Close Relationships

The Experiences in Close Relationships (ECR; Brennan, Clark, & Shaver, 1998b) was utilized to examine adult romantic attachment. The ECR is a 36-item self-report measure that assesses an individual’s attachment-related anxiety and avoidance. The items for the ECR were selected using factor analysis of the majority of existing self-report measures of adult romantic attachment (Brennan et al., 1998b).

The ECR contains 18 items assessing attachment avoidance (e.g., “I prefer not to show a partner how I feel deep down”) and 18 items measuring attachment anxiety (e.g., “I’m afraid that
I will lose my partner’s love”). Participants respond to these items on a 7-point Likert-type scale, ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The measure can be used to create two subscales, Avoidance and Anxiety, or four attachment categories. High scores on the Avoidance subscale reflect discomfort and avoidance of emotional closeness and dependency on others, whereas high scores on the Anxiety subscale indicate worry about interpersonal rejection and feelings of insecurity about the responsiveness and availability of one’s romantic partner. Based on one’s combination of Anxiety and Avoidance subscale scores, participants are grouped into one of the four attachment categories: secure (low Anxiety and Avoidance), preoccupied (high Anxiety, low Avoidance), dismissing (low Anxiety and high Avoidance), and fearful (high Anxiety and Avoidance) (Brennan et al., 1998b).

Fraley, Waller, and Brennan (2000) conducted a review of the existing attachment measures and determined that the ECR subscales exhibited the strongest psychometric properties. The subscales demonstrated strong reliability with alphas ranging from .90 to .95. In the current study, Cronbach’s alpha coefficients were .92 and .95 for the Anxiety and Avoidance subscales, respectively. With regard to construct validity, the two higher order scales of Anxiety and Avoidance are almost uncorrelated with one another ($r = .11$; Brennan et al., 1998b). Further, the ECR has demonstrated high construct, predictive, and discriminate validity (Crowell, Fraley, & Shaver, 1999).

**Internalized Shame Scale**

The Internalized Shame Scale (ISS; Cook, 2001) is a 30-item questionnaire that was used to assess internalized shame. It is composed of two subscales: Internalized Shame and Self-Esteem. Participants are asked to rate each item on a 5-point Likert-type scale ranging from 0 (Never) to 4 (Almost Always). There are 24 items for internalized shame (e.g., “I feel like I am
never quite good enough”) and six items for self-esteem (e.g., “I feel I have much to be proud of”). The current study only examined the internalized shame subscale.

Adequate reliability and validity have been established for the ISS. For instance, in a non-clinical sample, the ISS demonstrated high internal consistency (α = .95) and good test-retest reliability over a seven-week period (r = .84; Cook, 1994; Rybak & Brown, 1996). Convergent and discriminant validity data revealed positive correlations between the Internalized Shame subscale and the Multiscore Depression Inventory’s Alienation subscale (Berndt, Petzel, & Berndt, 1980) (r = .74) and negative correlations with the Tennessee Self-Concept Scale total score (Fitts, 1965) (r = -66) (Cook, 1994). In the current study, the ISS pre-MIP (α = .94) and post-MIP (α = .97) demonstrated high internal consistency.

*Compass of Shame Scale.*

The Compass of Shame Scale (CoSS; Elison et al., 2006b; Nathanson, 1992) measures the way in which individuals cope with and defend against shame by assessing use of the four shame coping styles described by Nathanson (1992), namely Attack Self, Attack Other, Withdrawal, and Avoidance. In the Attack Self category, the individual’s experience is negative, shame is internalized, and anger is turned on the self, whereas individuals in the Attack Other category do not accept the negative experience of self, likely deny shame’s message and then blame or ridicule someone else. An individual in the Withdrawal category tends to acknowledge the experience as negative, accept shame’s message as valid and tries to leave the situation. In the Avoidance category, the individual likely does not acknowledge the negative experience of self, denies the message of shame, and distracts from painful feelings. The format of the CoSS is a series of 48 items, the stems of which describe potentially shame-inducing situations (e.g., “When an activity makes me feel like my strength or skill is inferior”), followed by four
responses representing reaction characteristics of each coping style (e.g., “I act as if it isn’t so” [Avoidance], “I get mad at myself for not being good enough” [Attack Self], “I withdraw from the activity” [Withdrawal], “I get irritated with other people” [Attack Other]. Participants indicate the frequency with which they tend to make each of the four responses on a five-point Likert-type scale from 0 (Never) to 4 (Almost Always).

The initial version of the CoSS was composed of 72 items, which were reviewed for content validity and reduced to 48 items. Elison et al., (2006b) administered the 48 item CoSS to college students and adequate reliability and validity were established. The four scales demonstrated adequate internal consistency ($\alpha = .74$ to .91) and three week test-retest reliabilities ($r = .75$ to $r = .85$) for the four subscales. Convergent validity was demonstrated by comparing scores from the CoSS with scores from the Internalized Shame Scale (Cook, 2001) and Symptom Checklist-90 (Deragotis, 1992), among other measures. Cronbach’s alphas for the CoSS subscales Withdrawal ($\alpha = .88$), Attack Self ($\alpha = .92$), Attack Other ($\alpha = .86$), and Avoidance ($\alpha = .73$) demonstrated acceptable to excellent internal consistency for the present study.

**State Shame and Guilt Scale**

The State Shame and Guilt Scale (SSGS; Marschall, Sanftner, & Tangney, 1994) consists of 15 items that yield three subscales: Shame, Guilt, and Pride. For the purpose of the current study, only the five Shame subscale items were analyzed. The SSGS was originally created to assess phenomenological aspects of shame and to serve as a validity check for a shame induction experience. Participants rate how present the target emotion is using a 5-point Likert scale, ranging from 1 (Not feeling this way at all) to 5 (Feeling this way very strongly). Examples of shame items include “I want to sink into the floor and disappear” and “I feel small.” Scores on the Shame subscale range from 5 to 25 and higher scores indicate greater current levels of
shame. The SSGS demonstrated good reliability for the Shame subscale ($\alpha = .89$) in an undergraduate college student sample (Tangney & Dearing, 2002a). In the current study, the SSGS exhibited acceptable internal consistency when it was administered at baseline ($\alpha = .74$) and good internal consistency when it was administered post-MIP ($\alpha = .88$).

**The Experiential Shame Scale**

The Experiential Shame Scale (ESS; Turner, 1998) is a 10-item self-report measure that assesses three components of a shame reaction: physical, emotional, and social. Item examples, all rated on a 7-point Likert-type scale (1 to 7), are “Physically I feel: pale – flushed”, “Emotionally I feel: content - distressed”, and “Socially I feel like talking – being quiet.” Scores are summed and an average is obtained; higher scores indicate greater state shame. The ESS showed adequate internal consistency ($\alpha = .86$) in a sample of undergraduate students (Turner, 1998) as well as a sample of women with borderline personality disorder and healthy controls ($\alpha = .82$) (Rusch, Corrigan, Bohus, Jacob, Brueck, & Lieb, 2007).

In the current study, item 1 (Physically I feel: very warm - very cool) and item 10 (Socially I feel like no one sees me – people are looking at me) were removed to improve the ESS pre-MIP (ESSpre) internal consistency ($\alpha = .68$). Item 1 pertains to the participant’s physical body temperature. The research assistants reported that the temperature of the research lab was often very cold, which likely contributed to participants’ responses on this item not correlating with the overall scale (Corrected Item-Total Correlation $= -.19$). Item 10 asked participants to report about whether they felt others were looking at them. Each participant was in a private room alone for the duration of the study, which likely contributed to the lack of correlation between this item and the overall ESS scale (Corrected Item-Total Correlation $= -.12$). Removal of items 1 and 10 resulted in an acceptable internal reliability ($\alpha = .74$). Items 1
and 10 were removed from the ESS post-MIP (ESSpost) to ensure the same items composed the ESSpre and ESSpost. The ESSpost internal consistency was good ($\alpha = .87$).

**Impression Management**

The Balanced Inventory of Desirable Responding (BIDR-7; Paulus, 1998) consists of 40 items resulting in two subscales: Impression Management (IM) and Self-Deceptive Enhancement (SDE). For the purpose of the current study, only the 20-item IM subscale was analyzed. The IM was created to measure behaviors that are desirable but uncommon; if a participant endorses a high number of these unlikely behaviors, the participant may be exaggerating and intentionally trying to impress the administrator. Participants rate their agreement with each item using a 5-point Likert scale, ranging from 1 (Not True) to 5 (Very True). Examples of IM items include “I always obey laws even if I’m unlikely to get caught” and “I have never dropped litter on the street.” Odd-numbered items are reverse-scored, responses of a 1, 2, or 3 are assigned zero points and responses of a 4 or 5 are scored one point, the total score can range from 0 to 20, with high scores representing a higher total of exaggerated desirable responding.

The BIDR-7 exhibited good reliability for the IM subscale with Cronbach’s alphas ranging from .75 to .86, and test-retest correlations of .65 (Paulhus, 1991). Convergent validity for the IM subscale was demonstrated by its strong correlations with other measures of desirable responding (e.g., the Marlowe-Crown scale) and Lie scales (e.g., MMPI Lie scale) (Paulhus, 1991). In the current study, the IM subscale demonstrated acceptable reliability pre-MIP ($\alpha = .74$) and post-MIP ($\alpha = .78$). The IM score at baseline was used as a covariate in relevant analyses for which the assumptions of a continuous covariate were met.

**Rating Scale**
The Rating Scale was developed specifically for this study to be used as a manipulation check (Appendix B). Following the MIP, participants were asked to report how evocative they found the writing task to be, the degree to which they were able to visualize themselves in the memory while writing, and to what extent they experienced shame. Other emotions were listed as well to serve as distractors. Participants rated each item on a 7-point Likert-type scale ranging from 0 (Not at All) to 7 (Extremely).

Demographic Questionnaire

The demographic questionnaire was developed for the current study (Appendix C). Participants reported gender, ethnicity, sexual orientation, age, marital status, and GPA. The questionnaire was also used to collect data related to romantic relationship history (e.g., length of current romantic relationship, number of romantic relationships) and therapy history (e.g., currently attending therapy, past therapy experiences).

Implicit Shame

Development of the Emotional Stroop task. The Emotional Stroop (ES) task developed by Sabag-Cohen (2009) was used as a measure of implicit shame. The ES task is composed of 20 shame words, 20 threat words, and 20 neutral words. Shame words such as “exposed” and “defective” represented shame experiences, whereas shame words like “rejection” and “failing” depicted triggers of shame. Threat words included words such as “sorrow” and “harassment” and were included to control for the possibility that color naming latencies for shame words were due to the negative affect of these words rather than their shame meanings. Neutral words included words like “foot” and “paprika”.

Sabag-Cohen (2009) compiled shame words for the ES task through a series of steps. Shame words were identified based on the shame literature, through web based searches, and
then were rated for face validity by 14 different raters and measured for inter-rater agreement. To control for confounding factors, words in each word category (i.e., shame, threat, neutral) were matched by frequency in the English language and letter count. The selected words corresponded to an average 7th grade reading and comprehension level.

**Design and randomization of the ES task.** The ES task was run on a Dell computer with an Intel Core i5vPro processor. It was administered using SuperLab Pro software (version 5). Response time data were collected using a Cedrus Corporation RB-740 response pad with four keys matching the Stroop stimuli (i.e., red, blue, yellow, and green). Words were presented on a white screen in the four ink colors with size 40 Tahoma font. Participants were instructed to ignore the meaning of the words and only respond to the color as accurately and quickly as possible.

The ES task was designed to measure fast effects, which occur when participants exhibit slower responding to negative versus neutral stimuli, when these stimuli follow neutral stimuli (Frings, Englert, Wentura, & Bermeitinger, 2010). To examine fast effects during the ES task, a block of neutral words was followed by a block of negative-valence words (i.e., threat or shame words). The ES task for the current study was designed to have four separate blocks at time 1 (pre-MIP) and time 2 (post-MIP) with a block of neutral words preceding each block of shame or threat words (see Figure 1). In each trial, a single-color word was presented in the center of the screen and remained there until a response was made. After a participant’s response, the next stimulus was presented 500 ms later. A long inter-trial interval was implemented to better isolate the fast effect from carry-over effects (Frings et al., 2010).

Each block was composed of 10 stimuli. The sequence of stimuli in a block was randomly chosen. Habituation is one of the primary causes for the absence of effects in a large
portion of ES studies. Specifically, Ben-Haim, Mama, Icht, and Algom (2014) found that response times for emotion words fell precipitously beyond the first repetition, suggesting that excessive repetition decreases their emotive power, while this rate of decrease in response times was not found for neutral words. Based on these findings, each threat and shame word was presented a single time to each participant for the current ES task.

To control for order effects, participants were randomly assigned to one of two orderings, which changed whether shame or threat words were presented in blocks 2 or 4. Overall, each participant ran through eight blocks resulting in 80 trials total. Four of the blocks preceded the MIP and four of the blocks were presented following the MIP. After blocks 2 and 6 participants received a 15 second break. Prior to the experimental blocks, participants completed 10 practice trials with 10 colored letter-string stimuli (e.g., XYM, ZZXX) to familiarize them with the task.

To increase cognitive load, participants were asked to recite a seven-digit number as they performed the ES task. Mikulincer et al. (2004) showed that increasing cognitive load while performing the ES task bypasses participants’ defenses and potentially triggers a stronger reaction to the emotional words presented in the task. Further, extensive research has documented that individuals are able to process between five and nine items or “bits” (e.g., digits, letters) in short-term memory simultaneously (Miller, 1956).

*Mood induction procedure.* Currently, there exists no well-validated MIP to induce feelings of shame; therefore, an expressive writing task was constructed for the current study (Appendix D). The current study’s MIP was modeled after De Hooge, Breugelmans, and Zeelenberg (2008) who induced feelings of shame in participants through a writing task. Additionally, recommendations from Sabag-Cohen (2009) and Frattaroli (2006), including arranging that the disclosure occur in a private setting, the writing session last at least 15
minutes, and that participants be provided direct questions and specific examples of what to share, were considered in the development of the task. The word “shame” was not included in the writing task due to this word often heightening participants’ defenses in research studies (Tangney & Dearing, 2002a). Instead, participants were provided a definition of shame and examples of possible shame-inducing experiences. The descriptions of shame, as well as the examples, were derived from a number of definitions of shame as well as participants’ descriptions of shameful experiences (e.g., Brown, 2006; Tangney, 1992; Tangney, 1993; Tangney et al., 1996b).

During the first five minutes of the writing task, participants listed as many experiences in which they recalled within the last 5 years feeling ashamed. Following the creation of the list of shameful experiences, participants selected their clearest and most important memory of when they felt ashamed and spent 20 minutes writing about this event. Lastly, participants answered questions about the memory. The effectiveness of the MIP was assessed using the rating scale and self-report measures (i.e., state shame measures). Prior to the onset of data collection, a short pilot study was performed to test the effectiveness of the MIP and assess the level of difficulty of reciting a 5-digit versus 7-digit string, while completing the ES task. Based on the results of the pilot study, the MIP was deemed effective and a 7-digit string was selected for participants to recite.

Procedure

After receiving IRB approval for the Fall 2014 semester, participants signed up through SONA for a timeslot to complete the study in the laboratory. Participants completed data collection in a quiet room alone to minimize distractions, create standardized conditions, and increase their willingness to disclose. The sessions lasted 90-120 minutes. When participants
arrived to the testing site, they read and signed an informed consent (Appendix A). The study design was quasi-experimental repeated measures such that some of the measures were administered twice (i.e. Time 1 [pre-mood induction] and Time 2 [post-mood induction]).

During Time 1, participants first completed the ES task to establish a baseline. The ES task began with a practice session. Following the practice session, participants were instructed to ignore the meaning of the words and only respond to the color of the word as accurately and quickly as possible. Prior to starting the first trial, participants were asked to recite a 7-digit number as they performed the ES task. Participants were informed that they were being audio recorded repeating the number to ensure that they said the number throughout the task. Following the ES task, participants completed the Ishihara Test, to screen for color blindness, and one of two counterbalanced online questionnaires that included the ECR, PBI, CoSS, ISS, SSGS, ESS, and IM.

After Time 1, participants began the mood induction procedure. Participants spent five minutes listing events during which they experienced feelings of shame based on the definition provided. Following the creation of the list, participants selected the clearest and most important memory and wrote a detailed account of the event. After the mood induction procedure, participants completed the second ES task. Typically 40 to 45 minutes passed between the completion of the first ES task and the participant beginning the second ES task. Lastly, participants completed one of two counterbalanced online questionnaires that included the ISS, SSGS, ESS, IM, and the RS. Participants were then debriefed about the goals of the study.

Due to difficulty recruiting participants with a dismissive attachment style, an IRB modification was completed during the spring 2015 semester to offer these participants $15 cash in addition to the five SONA credits. Data collection was identical to the fall 2014 data.
collection procedure except the ECR was administered as a screening instrument. To prevent the research assistants from knowing a participant’s attachment style and possibly biasing their behavior, participants with other attachment styles were also run throughout the spring semester.

Qualitative Coding for the MIP Written Responses.

Qualitative codes were created from the shame MIP written responses to provide a clearer understanding of the MIP and identify common shame triggering events for college students. Tangney (1992) served as a guide for the qualitative coding process. Five content codes were developed based on a review of the written responses: shame or not shame, nature of the event (i.e., interpersonal or intrapersonal), performance (i.e., issues with the quality of one’s skills, abilities, or performance) and resolution (event negatively impacting the participant). See Appendix E for the full code definitions and interrater reliability data for each code.

The Resolution code is described in more depth here due to its relevance to a number of analyses. Resolution was coded dichotomously to identify participant’s who did not follow the writing task instruction that asked participants to write about an event that still bothers them. The No Resolution code was assigned to events that the participant described as still upsetting, affecting them negatively, and/or continuing to experience negative feelings toward others involved in the event (e.g., “I was upset with myself. I still am.”). The Resolved code was assigned to events that did not seem to currently bother the participant. More specifically, the participant felt like things were settled and accepted the event, circumstances, and/or effects of the event (e.g., “I soon got over it and moved on with my life knowing there wasn’t much I could do”). Additionally, the participant may have indicated that they would not change anything about the event because of growth or new realizations (e.g., “I wouldn’t change anything because in defeat there is learning about [your] flaws and improving from them.”)
By design, there were no missing data for the 271 participants (i.e., all self-report measures were completed online and the ES task used Super Lab; thus, the data were directly imported into SPSS). The ES effect was calculated by subtracting the mean reaction times (RTs) between emotion blocks (i.e., shame and threat words) and neutral blocks (i.e., neutral words) (Ben-Haim et al., 2014) (See Figure 1 for the ES task block order). The ES RTs for shame, threat, and neutral stimuli were calculated using only RTs for correct responses. Block 1, the first block of neutral words at baseline, displayed a significantly longer latency \((p < .001)\) than any other block of stimuli. Based on the methodology of Ben-Haim et al. (2014), it was determined that this block would be removed from all analyses. To maintain consistency in the calculation of the ES effect, Block 5, the first block of neutral words after the MIP, was also removed from all analyses. Consequently, the ES effect scores were calculated by subtracting the mean RTs of the second block of neutral words (blocks 3 and 7) from the shame and threat blocks of words for baseline and after the MIP. These calculations resulted in the difference scores: pre-MIP ES Shame RT and ES Threat RT as well as the post-MIP ES Shame RT and ES Threat RT.

Assumption Testing

Basic screening procedures were used to check for outliers and to test the assumptions of ANOVA, repeated-measures ANOVA, MANOVA, and repeated-measures MANOVA. The data were screened for univariate and multivariate outliers. Standardized values (i.e., z-scores) were calculated to determine univariate outliers on variables relevant to hypothesis testing. Univariate outliers were detected for the State Shame and Guilt Scale pre-MIP (SSGSpre) and the Attack...
Other subscale. The values of these outliers were manually transformed to reflect a z-score equal
to and below 3.29 (Tabachnick & Fidell, 2007).

The ES RTs for each block of shame, threat, and neutral words were screened for
univariate outliers. Following the manual transformation of the outliers for each block of words,
the difference score variables for the ES (i.e., pre-MIP ES Shame and Threat RTs and post-MIP
ES Shame and Threat RTs) were also screened for univariate outliers and outliers were modified.
Mahalanobis Distances were calculated to screen for multivariate outliers. One multivariate
outlier was found for hypotheses 2 and 7, and this participant was removed from these two
analyses.

Next, normality of the dependent variables was assessed using total scores, means,
standard deviations, distributional properties (i.e., skewness and kurtosis), and histograms.
Scores on the ESSpre, SSGSpre and post, Internalized Shame Scale pre-MIP (ISSpre), and
Attack Other violated the assumption of normality and were positively skewed. Conceptually,
one would expect the ESSpre, SSGSpre, SSGSpost, ISSpre, and Attack Other scales to be
positively skewed because most participants reported low levels of state and trait shame and
engagement in the shame coping style Attack Other, particularly at baseline, which was expected
for a non-clinical sample. Square root, logarithmic, and inverse procedures were used to
transform these measures; however, the transformation procedures did not significantly change
the data to a normal distribution.

Additionally, pre and post ES Shame RTs and ES Threat RTs were highly kurtotic, due to
the majority of the scores located near zero. Square root, logarithmic, and inverse procedures did
not significantly reduce the kurtosis. Standardized and unstandardized residuals were also
computed, but the issues with kurtosis remained. Ultimately, the non-transformed variables for
the self-report measures and ES RTs remained in the data, as ANOVA and MANOVA, including repeated-measures designs, tend to be robust to violations of normality (Tabachnik & Fidell, 2007). The assumptions of linearity and multicollinearity for MANOVA and repeated measures MANOVA were tested with correlation analyses and an examination of scatter plots. Bivariate correlation coefficients ranged from -.01 to .59 for these analyses, indicating no issues with multicollinearity. Scatter plots of the relationship between dependent variables were examined to detect curvilinear relationships; no violations of linearity were noted. Homogeneity of variance-covariance was tested via Box’s test. Hypothesis 4 was the only analysis that violated Box’s test; the more conservative Pillai’s trace statistic was interpreted to counteract this violation. Finally, the assumption of sphericity only applies to repeated measures designs when there are three or more within-group conditions (Tabachnick & Fidell, 2007). In the present study, the MANOVAs and ANOVAs included one to two within-group conditions, thus sphericity was not a concern.

Initial Analyses

*Descriptive Analyses.*

The distribution of ECR attachment classifications consisted of 21.9% \((n = 58)\) secure, 29.8% \((n = 79)\) preoccupied, 19.6% \((n = 52)\) dismissive, and 28.7% \((n = 76)\) fearful participants. With regard to parent-child bond, 33.3% \((n = 78)\) of participants were classified in Optimal Parenting, 35.5% \((n = 83)\) Affectionate Constraint, 10.7% \((n = 25)\) Neglectful Parenting, and 20.5% \((n = 48)\) Affectionless Control quadrant. To examine differences among attachment style and the demographic variables (i.e., gender, ethnicity, sexual orientation, relationship status, therapy attendance, class rank, age, number of romantic relationships, and GPA) multiple chi-square tests and ANOVAs were conducted (Tables 1 and 2).
Significant differences for attachment style were noted in relationship status $\chi^2 (6, n = 265) = 24.88, p < .001, \phi = .306$. Specifically, participants evidencing a secure attachment style were over-represented in the living together/married category, whereas they were under-represented in the single category compared to the expected frequency. There were also significant differences in therapy attendance by attachment style $\chi^2 (3, n = 265) = 19.95, p < .001, \phi = .274$. An examination of the standardized residuals revealed that participants with a preoccupied attachment style attended therapy more often than the expected frequency. Finally, for the ANOVA examining age by attachment style, there was a significant main effect Welch’s $F(3, 120) = 3.05, p = .032$; although, when the Bonferroni adjusted post-hoc tests were examined, there were no significant differences. Correlation coefficients were computed for all of the dependent variables (Table 3).

**Effectiveness of the MIP**

The Rating Scale (RS) was administered after the MIP to assess the effectiveness of the MIP. Participants rated on a 7-point Likert-type scale ranging from 1 (Not at All) to 7 (Extremely) how evocative (i.e., bringing strong feelings and memories to mind) they found the writing task, the degree to which they were able to visualize themselves in the memory, and the degree to which they currently felt shame (Table 4). Analysis of the RS indicated that the MIP was generally experienced as mood-altering by the sample. More specifically, 80% of the sample rated the evocativeness of the writing task “very evocative” to “extremely evocative” (i.e., a score of 5 or greater on the 7-point scale). Additionally, 91% of the sample rated their ability to visualize themselves in the memory as “very easy” to “extremely easy” (i.e., a score of 5 or greater on the 7-point scale).
ANOVA were conducted to examine group differences on the RS items among adult attachment classifications (Table 4). Results indicated no significant differences in ability to visualize the memory by attachment style, $F(3, 261) = 1.32, p = .270$. There were significant group differences on self-reported shame, $F(3, 261) = 8.72, p < .001$, partial $\eta^2 = .091$ (medium effect). Bonferroni adjusted post-hoc tests indicated that students with a preoccupied attachment reported more shame than students with a dismissive or secure attachment style, while students with a fearful attachment reported significantly more shame than students with a secure attachment. Overall, these results match the hypothesized pattern that when a participant is explicitly asked to report feelings of shame, participants with a fearful or preoccupied attachment style report significantly more shame than participants with a secure or dismissive attachment style.

A final ANOVA compared attachment groups on evocativeness $F(3, 261) = 2.56, p = .057$, with a small effect (partial $\eta^2 = .028$). Bonferroni adjusted pairwise comparisons demonstrated that participants with a dismissive attachments style found the task significantly less evocative compared to participants with a preoccupied attachment style ($p = .010$). Interestingly, when the ANOVA for evocativeness was rerun with responses coded as Resolved removed, the pairwise comparison difference between participants with a dismissive or preoccupied classification was no longer significant ($p = .164$). These results suggest that participants with a dismissive attachment style were more likely to rate the task as less evocative if their writing task was coded as Resolved, providing further evidence of the importance of the Resolution code.

Hypothesis Testing – Adult Romantic Attachment Styles

*Hypothesis 1*
A one-way between-groups MANOVA was conducted to examine how adult attachment style is related to baseline state shame (SSGS and ESS scores), trait shame (ISS), and implicit shame levels (ES Shame RTs pre-MIP) (see Tables 5, 6, 7, and 8). Results of the MANOVA showed that the main effect for adult attachment style was statistically significant at the multivariate level, Wilks’ Lambda = .79, \( F(12, 682.90) = 5.25 \quad p < .001 \), partial \( \eta^2 = .075 \) (Table 9). When evaluating dependent variables separately, significant differences were noted in state and trait shame, but not implicit shame at baseline.

Bonferroni adjusted post-hoc tests revealed that on the SSGSpre students who were securely attached \((M = 6.17, SD = 2.32)\) scored significantly lower on state shame than students with a preoccupied \((M = 7.94, SD = 2.58)\) or fearful attachment \((M = 8.12, SD = 3.40)\). Similarly, individuals with a secure attachment style \((M = 2.71, SD = .93)\) reported significantly less state shame on the ESSpre compared to individuals with a preoccupied attachment style \((M = 3.16, SD = 1.00)\). Finally, individuals with a secure attachment style \((M = 16.60, SD = 12.11)\) scored significantly lower on trait shame at baseline than individuals with a preoccupied \((M = 37.00, SD = 15.60)\), fearful \((M = 36.22, SD = 19.61)\) or dismissive attachment style \((M = 32.58, SD = 18.35)\). These results provide partial support for hypothesis 1, as individuals with a secure attachment style reported significantly lower state and trait shame than individuals with preoccupied or fearful attachment style at baseline. Contrary to hypothesis 1, however, participants with a dismissive attachment style reported significantly more trait shame than individuals with a secure attachment.

**Hypothesis 2**

A repeated measures MANOVA was run to examine changes in state shame from baseline to after the MIP by adult attachment style. State shame was assessed using the SSGS
and ESS at baseline and following the MIP. There were significant multivariate effects for attachment style, Wilks’ Lambda = .877, $F(6, 518) = 5.83$, $p < .001$, partial $\eta^2 = .063$ and time, Wilks’ Lambda = .866, $F(2, 259) = 20.02$, $p < .001$, partial $\eta^2 = .134$ (Tables 6 and 7). Although the interaction between attachment style and time only approached significance ($p = .061$), the non-significant interaction is of interest however, when the univariate effects for the SSGS and ESS were examined.

Specifically, participants in every insecure attachment classification demonstrated changes in state shame on the SSGS from baseline to after the MIP, while securely attached participants did not (i.e., preoccupied, $t(77) = -3.72$, $p < .001$, fearful $t(75) = -5.21$, $p < .001$, and dismissive attachment style $t(51) = -2.79$, $p = .007$; Figure 2). When state shame was assessed with the ESS, the results of the interaction were different for participants with a dismissive attachment style. In particular, students with a preoccupied, $t(77) = -2.75$, $p = .007$, or fearful attachment style, $t(75) = -3.13$, $p = .003$, demonstrated significant increases in state shame on the ESS from baseline to after the MIP, whereas the ESS scores for participants classified as dismissive or secure were stable (Figure 3). These results provide partial support for hypothesis 2, as students classified as preoccupied or fearful evidenced significant changes on both measures of state shame while state shame scores for students classified as secure remained stable. Contrary to predictions, students classified as dismissive showed significant changes in self-reported state shame on the SSGS.

Differences in state shame scores among the adult attachment styles were examined post-MIP. There were significant differences in SSGSpost scores by attachment style, $F(3, 260) = 10.26$, $p < .001$, partial $\eta^2 = .106$ (medium effect), and the ESSpost scores, $F(3, 260) = 6.95$, $p < .001$, partial $\eta^2 = .074$ (medium effect). More specifically, students with a secure attachment ($M$
produced significantly lower scores on the SSGSpost compared to students with a preoccupied \((M = 9.81, SD = 4.26)\), fearful \((M = 10.64, SD = 5.20)\), or dismissive attachment \((M = 8.85, SD = 4.47)\). A similar pattern emerged with the ESS, in that; individuals with a secure attachment pattern \((M = 2.64, SD = .90)\) scored significantly lower on the ESSpost than individuals with a preoccupied \((M = 3.50, SD = 1.31)\), fearful \((M = 3.44, SD = 1.20)\) or dismissive pattern \((M = 3.27, SD = 1.25)\).

**Hypothesis 3**

Hypothesis 3 predicted that trait shame would remain stable from baseline to after the MIP for the four adult attachment classifications. A one-way repeated measures ANOVA was run to examine changes in the ISS scores from baseline to post-MIP by attachment style. Contrary to predictions, there was an attachment classification by time interaction, Wilks’ Lambda = .95, \(F(3, 261) = 4.95, p = .002\), partial \(\eta^2 = .054\) (small to medium effect). There was also a significant main effect for time, Wilks’ Lambda = .98, \(F(1, 261) = 4.93, p = .027\), partial \(\eta^2 = .019\) (small effect). (Tables 8 and 10). Further analysis of the interaction for trait shame and attachment style showed that individuals with a preoccupied, \(t(78) = -3.72, p < .001\), or fearful attachment style, \(t(75) = -2.64, p = .010\), showed significant increases in trait shame from baseline to after the MIP, while trait shame for individuals with a dismissive or secure attachment style remained stable.

Similar to baseline, there were significant differences in trait shame by attachment style post-MIP, \(F(3, 261) = 20.82, p < .001\), partial eta square = .193 (large effect). Individuals with a secure attachment style \((M = 16.74, SD = 13.56)\) reported significantly lower trait shame compared to individuals with a preoccupied \((M = 40.80, SD = 18.33)\), fearful \((M = 38.96, SD = 22.19)\), or dismissive attachment style \((M = 30.84, SD = 21.14)\). Students evidencing a
dismissive attachment pattern also reported significantly less trait shame compared to students evidencing a preoccupied attachment pattern. The difference in trait shame after the MIP for individuals with a preoccupied or dismissive attachment style seem to be a result of the significant increase in trait shame across time for the students who were classified as preoccupied, and the stable levels of trait shame for students who were classified as dismissive.

**Hypothesis 4**

A repeated measures ANOVA was conducted to assess changes in implicit shame, as assessed by the ES Shame RTs, time (pre-MIP and post-MIP), and attachment style. The independent variable was attachment style, the dependent variables were ES Shame RTs at baseline and after the MIP, and the within subjects factor was time. Contrary to Hypothesis 4, there was no interaction between time and attachment style, Pillai’s Trace = .001, \( F(3, 261) = .025, p = .995, \) partial \( \eta^2 < .001, \) or main effect for time, Pillai’s Trace = .001, \( F(1, 261) = .06, p = .800, \) partial \( \eta^2 < .001 \) (Tables 5 and Figure 4).

**Hypothesis 4 exploratory analyses.** Participants whose written response was coded as Resolved may not have experienced the mood induction and would not be expected to show a change in RT for the ES Shame words from baseline to after the MIP. Thus, the repeated measures ANOVA for hypothesis 4 was rerun excluding the 39 participants whose responses were coded as Resolved (Table 11) Although there was no significant interaction between time and attachment style, Pillai’s Trace = .003, \( F(3, 222) = .226, p = .878, \) partial \( \eta^2 = .003, \) or main effect for time, Pillai’s Trace = .002, \( F(1, 222) = .06, p = .494, \) partial \( \eta^2 = .002, \) the pattern of results changed notably for only participants classified as dismissive (Figure 5). Specifically, participants with a dismissive attachment style showed an average increase in RT of 43ms from baseline to after the MIP when the Resolved written responses were excluded. This trend
matches the hypothesized pattern that participants with a dismissive attachment would show an increase in implicit shame (a slowing of ES Shame RTs) from baseline to after the MIP. This shift in the pattern of results for only individuals evidencing a dismissive attachment pattern makes sense, as these participants were significantly more likely to have their written response coded as Resolved compared to the individuals with the attachment styles. The pattern of results for shame words did not occur for threat words, ES Threat RTs were on average 49.07ms faster from baseline to after the MIP for individuals with a dismissive attachment style.

Two independent-samples t-tests were conducted with the subsample of participants whose written responses were coded as Resolved. The t-tests were conducted to examine differences in implicit shame for only individuals classified as fearful or dismissive at baseline and following the MIP when the Resolved responses were excluded (N = 104). Participants with a fearful attachment style (M = 62.75, SD = 249.12) demonstrated significantly slower ES Shame RTs at baseline, t(102) = -2.064, p = .042, compared to the participants with a dismissive attachment style (M = -38.75, SD = 211.45). Following the MIP, there were no significant differences in ES Shame RTs, t(102) = -1.54, p = .128, for students evidencing a fearful (M = 60.38, SD = 153.36) or dismissive attachment pattern (M = 4.22, SD = 214.56), further highlighting the notable increase in implicit shame for individuals with a dismissive attachment pattern after the MIP.

**Hypothesis 5a**

Four one-way between groups ANCOVAs were run to test hypothesis 5a, 5b, 5c, and 5d, which predicted differences in use of the shame maladaptive coping styles among individuals with the four adult attachment styles. The independent variable for each analysis was adult attachment style and the dependent variable was the maladaptive shame coping style. Impression
management (IM) met the assumptions for a continuous covariate and was subsequently included in each analysis as such.

For hypothesis 5a, regarding the maladaptive shame coping style Attack Self, the ANCOVA for attachment style revealed a statistically significant main effect, $F(3, 260) = 11.12$, $p < .001$, partial $\eta^2 = .146$, (large effect) (Table 12). Bonferroni adjusted post-hoc tests showed that, as expected, individuals with a secure attachment style ($M = 43.75$, $SD = 7.64$) were significantly less likely to respond with contempt and harsh criticism directed at the self when experiencing shame compared to individuals with a preoccupied ($M = 53.34$, $SD = 9.14$), fearful ($M = 51.84$, $SD = 10.30$), or dismissive attachment style ($M = 48.84$, $SD = 9.70$). Also consistent with hypothesis 5a, participants with a preoccupied attachment were significantly more likely to cope with shame by psychologically attacking themselves than were participants with a dismissive attachment.

**Hypothesis 5b**

Results of the ANCOVA for hypothesis 5b showed a statistically significant difference in Attack Other scores for the four attachment styles, $F(3, 260) = 6.59$, $p < .001$, partial $\eta^2 = .071$ (medium effect) (Table 12). Interestingly, IM, $F(1, 260) = 30.85$, $p < .001$, partial $\eta^2 = .106$, explained more of the variance than adult attachment classification. When the correlations were examined, Attack Other was the only measure that had a medium negative correlation with impression management ($r = -.352$), indicating that the higher the score on impression management, the less likely the participant was to report engaging in the coping style Attack Other.

Pairwise comparisons (Bonferroni adjusted) indicated that students with a preoccupied ($M = 52.29$, $SD = 9.78$) or fearful attachment ($M = 50.83$ $SD = 9.98$) reported coping with shame
significantly more by blaming or directing feelings of anger toward others than participants with a dismissive ($M = 48.21, SD = 10.46$) or secure attachment ($M = 46.28, SD = 8.53$). These findings provide partial support for hypothesis 5b that some individuals with an insecure attachment style (i.e., fearful or preoccupied) are more likely than people with a secure attachment style to defend against feelings of worthlessness and inadequacy associated with shame by externalizing the shame through making someone else (often the source of the shame) feel worse.

**Hypothesis 5c**

There was a statistically significant difference between attachment styles on self-reported use of Withdrawal $F(3, 260) = 14.58, p < .001$, partial $\eta^2 = .15$ (Table 12). Post-hoc comparisons indicated that participants who were classified as preoccupied ($M = 52.99, SD = 8.68$), fearful ($M = 51.94, SD = 9.88$) or dismissive ($M = 50.36, SD = 10.34$), were more likely to respond to shame by attempting to physically leave the shame-inducing situation than participants who were classified as secure ($M = 42.88, SD = 7.99$). These results provide support for hypothesis 5c, as individuals with a secure attachment style reported significantly less use of Withdrawal than individuals with an insecure attachment style.

**Hypothesis 5d**

Hypothesis 5d stated that participants with a fearful or dismissive attachment style would score significantly higher on the shame coping style Avoidance compared to participants with a preoccupied or secure attachment style. After controlling for the effects of impression management, group differences in Avoidance across attachment styles only approached significance $F(3, 260) = 2.59, p = .053$, partial $\eta^2 = .029$ (Table 12). Moreover, the group differences did not fit the hypothesized pattern. Specifically, post hoc analyses (Bonferroni
adjusted) revealed individuals with a preoccupied attachment style ($M = 52.29, SD = 9.78$) reported significantly higher levels of distracting and disconnecting the self from shame compared to individuals with a secure attachment style ($M = 47.62, SD = 9.63$).

Exploratory Analyses - Written Responses

The written responses from the MIP were coded along five dimensions: shame or not shame, interpersonal or intrapersonal, social agent, performance, and resolution. Written responses were also coded for type of shame triggering event. Descriptive analyses for each code are presented in Tables 13 and 14. Six of the 271 responses were coded as “not shame”. Because the objective of the study was to induce feelings of shame during the MIP, these six participants’ written responses were not included in the analyses.

Five chi-square tests for independence were run to examine differences in the written response codes. Responses were coded as interpersonal or intrapersonal in nature, and there were no significant attachment style differences in the nature of the event described, $\chi^2 (3, n = 265) = .000, p = .357, \phi = .11$. The majority of the sample wrote about an interpersonal event (i.e., 92%), suggesting that shame tends to occur in the context of interpersonal relationships.

A chi-square test was conducted to compare adult attachment styles on the social agent involved in their written response. Responses that were intrapersonal in nature were excluded from the analysis because there was no social agent present. There were no significant differences in the social agent involved by attachment style, $\chi^2 (15, n = 244) = 7.84, p = .930, \phi = .179$. Family members and a (ex-) romantic partner were the most common social agents for students with a secure (30.2% and 20.8%, respectively), preoccupied (25.7% and 29.7%, respectively), or fearful attachment style (33.3% and 25.0%, respectively). Family members and
peers were the most common social agents for the students with a dismissive attachment style (33.3% and 20.0%, respectively).

A chi-square test was run to compare how often people with different attachment styles included performance content in their shame narrative. No significant differences were apparent, \( \chi^2 (3, n = 265) = 19.95, p < .001, \phi = .274 \), and 18% of the total sample’s written responses included an event in which the quality of one’s performance, skills, and/or abilities was at issue. The chi-square test for written response coded as Resolved by attachment style demonstrated a significant association, \( \chi^2 (3, n = 265) = 19.95, p < .001, \phi = .274 \). Follow-up tests involving an examination of standardized residuals revealed that more written responses for individuals with a dismissive attachment style involved a Resolved event than would be expected statistically. Specifically, participants with a dismissive attachment style were more likely to write about a shameful event that they felt they had accepted and/or the situation resulted in personal growth or new realizations for them, despite the writing task instructions.

Lastly, two ANOVAs were conducted to examine differences in word count and self-blame across the four adult attachment styles. There were no significant differences in word count by attachment style, \( F(3, 261) = .214, p = .887 \). The ANOVA for attachment style and level of self-blame revealed a statistically significant main effect, \( F(3, 256) = 10.38, p = .038 \), partial \( \eta^2 = .032 \), however, with a small effect size. Bonferroni adjusted pairwise comparisons indicated that participants with a preoccupied attachment style endorsed significantly more self-blame regarding the shameful event than did participants with a secure attachment style. Lastly, frequencies for type of shame triggering event were computed (Table 14). The top five shame triggering events for the overall sample were “physical appearance and/or eating behavior.
critiqued” \( (n = 37) \), “trauma” \( (n = 32) \), “academic performance” \( (n = 18) \), “being cheated on” \( (n = 15) \), and “failure to meet others' expectations” \( (n = 15) \).

CHAPTER 4

DISCUSSION

The primary purpose of the current study was to address limitations in the shame literature by examining differences in responses to shame, explicit shame, and implicit shame across the adult romantic attachment styles. Due to the lack of studies using a validated shame MIP, a writing task was designed to serve as the MIP and elicit feelings of shame. The following section begins by addressing the content of the participants’ MIP written responses and providing an evaluation of the effectiveness of the shame MIP. The relationship between implicit shame and adult attachment style is discussed, followed by the patterns of findings for self-reported state and trait shame among the adult attachment styles. Three secondary topics are also explored a) the variability in state shame findings based on the measure utilized, b) the bi-directional relationship between state and trait shame, and c) differences in how people with different adult attachment styles cope with shame. This chapter concludes with sections that address clinical implications, limitations to the current study, and future directions for research.

Composition of the MIP Written Responses

The content of the MIP written responses was analyzed to describe individual differences regarding shame-triggering events and to provide a more detailed understanding of the MIP written responses used to elicit feelings of shame. Five content codes were developed based on a review of the written responses: shame or not shame, nature of the event (i.e., interpersonal or intrapersonal), performance (i.e., issues with quality of one’s skills or abilities), social agent (i.e.,
person involved in shame event), and resolution (i.e., does the event still have a negative impact). The writing task directed participants to write about their clearest and most important memory that still bothers them. The memory needed to involve the participant feeling self-conscious and some combination of inferior, not “good enough,” rejected because of their flaw(s), and/or an intense desire to hide their weaknesses from others. That is, they were instructed to write about an experience of shame based on a description of that emotion. Six participants’ however, wrote about an experience that did not meet the definition of shame. Their responses were coded as “not shame” and excluded from all analyses.

The themes of the top five shame triggering events in this college student sample were “physical appearance and/or eating behavior critiqued,” “trauma,” “academic performance,” “failing to meet other’s expectations,” and “being cheated on.” Overall, when examining the content codes, there were no significant differences by attachment style for nature of event, performance content, or social agent. Specifically, the majority of participants wrote about an interpersonal event, which is consistent with the shame literature (Lewis, 1980; Scheff, 2003; Tangney, 1992). In the current study, 18% of participants’ written responses involved an event during which the quality of the participant’s performance, skills, and/or abilities was at issue. Consistent with the results of Tangney (1992), findings regarding a performance component also suggest that shame often occurs in an evaluative context.

For participants who wrote about a shameful interpersonal event, the other person most commonly involved in the event was a family member or a (ex-) romantic partner for participants with a preoccupied, fearful or secure attachment pattern. In contrast, the most common social agents for individuals with a dismissive attachment style were family members or peers. One potential reason the written responses for individuals with a dismissive attachment
style did not include a/an (ex-) romantic partner as often as participants with other attachment styles is that the former were less likely to be involved in a romantic relationship. Indeed, participants evidencing a dismissive attachment pattern composed the largest proportion of participants in the “single or separated” category for relationship status. Alternatively, participants with a dismissive attachment style may be less comfortable writing about an event involving a specific person, such as a friend or a romantic partner/interest, and as a result, wrote about a group of their peers (e.g., classmates, teammates), without identifying a specific relationship. These explanations are consistent with Brennan et al. (1998) who stated that those with a dismissive attachment style tend to avoid interpersonal connectedness.

In contrast to the other content codes, there were significant differences among the attachment styles on the Resolved code, which was created to identify participants who did not follow the task’s instructions and instead, wrote about an event that seemed to no longer “bother them,” or cause psychological distress. Thirty-nine participants’ responses were coded as Resolved. Individuals with a dismissive attachment style wrote about a Resolved event significantly more often than participants with the other three attachment styles.

These findings are consistent with Mikulincer and Shaver (2003) who described individuals with a dismissive attachment style as more likely to distance themselves from emotional stimuli, and as a result, in the current study they may have consciously or unconsciously selected an event that was not currently emotionally upsetting to them when compared to individuals with other attachment styles. An alternative explanation for this same finding is related to the work of Main and Goldwyn (1985/1998), who found that when individuals with a dismissive attachment style completed the AAI, they demonstrated a tendency to indicate that they were not affected adversely by frightening or hurtful events. In the present
study, this sense of personal invulnerability may have contributed to these participants writing in a way that suggested an event did not bother them (e.g., focus on positive growth or what they learned from the shameful event), even if the shame-triggering event still negatively affects them.

In terms of the qualitative methodology of the current study, a careful search of the shame literature identified Tangney (1992) as the only other researcher who specifically explored events that college students identify as shame-inducing. The current study provided participants 20 minutes to write and multiple pages of space, which expanded upon Tangney’s (1992) methodology during which participants wrote a single line description of a shame-inducing situation. In addition, Tangney (1992) asked participants to write about an event during which “they were most likely to feel shame,” while the current study asked participants to select an event when they personally experienced shame.

Effectiveness of the Shame MIP

As described in the introduction, there is no well-validated MIP in the literature to induce feelings of shame, and the shame MIPs utilized in previous studies (e.g., Sabag-Cohen, 2009) were limited in their potency. Consequently, to contribute to the existing literature, a shame MIP was designed for the current study. Overall, there is conflicting evidence that the MIP was successful in inducing feelings of shame. The pattern of results regarding the visualization and evocativeness items on the rating scale, state shame, and implicit shame provide evidence for the effectiveness of the shame MIP, whereas the relatively low scores on the state and trait shame measures suggest diminished effects.

Each participant completed a rating scale as one way to assess the efficacy of the MIP. Upon examination of the rating scale items, about 90% of participants were easily able to
visualize themselves in the memory and about 80% found the task to be very emotionally evocative. Additionally, individuals with an insecure attachment style demonstrated significant increases in self-reported state shame on the SSGS from baseline to after the MIP. Finally, although the increases in response time on the ES task remained non-significant due to the large standard deviations, when the Resolved responses were removed from the analysis, patterns for implicit shame were notably altered among participants with a dismissive attachment styles. More specifically, students with a dismissive attachment style showed an average increase of 43 ms in response time on the Emotional Stroop task from baseline to after the MIP, suggesting an increase in implicit shame. Interestingly, participants with a dismissive attachment style showed this increase despite their tendency to utilize a deactivation strategy to regulate emotion (Mikulincer & Shaver, 2003).

When assessing the effectiveness of the shame MIP, it may also be important to examine the item on the rating scale that specifically asked participants to rate their post-MIP level of shame on a 7-point Likert scale. The average rating for level of post-MIP shame among all participants was 3.26 out of 7. One possible interpretation of this finding is that the MIP was not generally effective in inducing feelings of shame. Alternatively, the MIP may have effectively induced feelings of shame, yet participants were unable to accurately report their levels of shame when explicitly asked to identify their shame on the rating scale item. Specifically, participants would need to be aware of their emotional experience and likely differentiate between similar emotions; such assumptions are not often met in research settings (Robins et al., 2007). Furthermore, asking explicitly about shame may trigger more defensive responding than measures that assess shame more indirectly (Tangney & Dearing, 2002a).
A number of aspects of the data support this conclusion that participants experienced difficulty accurately reporting their levels of shame and/or may have responded more defensively to the shame rating scale item. First, on indirect measures of state and trait shame that assessed aspects of the experience of shame (e.g., view of self, physiological and social experience), there was an overall pattern of increased shame across time. Second, there was a lack of significant differences on the rating scale shame item administered post-MIP between students with a dismissive or secure attachment pattern, while individuals with a dismissive attachment pattern scored significantly higher than securely attached participants on all of the indirect state and trait shame measures following the MIP. The lack of significant differences endorsed on the shame rating scale item may be accounted for by the more activated defenses of individuals with a dismissive attachment style when they were explicitly asked about shame. Such defenses appear to not be activated to the same degree with more indirect questions about shame.

Finally, when the state and trait shame scores were examined more closely, it was determined that although there were significant increases in scores from baseline to after the MIP, the levels of state and trait shame were still relatively low for the sample following the shame MIP. It is important to consider that although the majority of participants scored in the lower half of the possible ranges for the state and trait shame measures, the current study’s sample is composed of college students, who are likely higher functioning compared to their age mates in a clinical sample. The relatively low levels of shame are similar to other studies of shame and college students (e.g., Gross & Hansen, 2000; Sabag-Cohen, 2009). Examining state and trait shame in a clinical sample with the current study’s shame MIP may result in higher overall scores on the shame measures and could be examined in future studies.

Implicit Shame and Attachment Styles
Shame has been described as a bypassed emotion; as such, measuring shame through only self-report is unlikely to assess implicit shame (Harder & Lewis, 1987). In the current study, implicit shame was examined using the Emotional Stroop (ES) task. There were no significant differences among the adult attachment styles in implicit shame at baseline or following the shame MIP, and no significant changes in implicit shame from baseline to after the MIP. One possible explanation for the lack of significant differences for implicit shame pertains to the limited number of practice trials (words) and experimental trials. Due to the length of the data collection procedure, the current study utilized less practice and experimental trials than some other research studies using the Emotional Stroop task. As such, participants may have still been learning the task when the experimental trials started, and the size of the groupings (i.e., blocks) of emotion words may have been too small to detect the change in participants’ response times that would indicate the subtle shifts in implicit shame. The impact of the practice session and number of experimental trials will be discussed in more depth in the Limitations section. Another important explanation for the lack of significant differences for implicit shame between the adult attachment styles seems to be a result of the large standard deviations of the reaction time scores. The size of the standard deviations is indicative of large within group differences, despite the removal of outliers. The high variability makes it challenging to find significant differences.

Interestingly, when the analysis examining change in implicit shame from baseline to after the MIP was rerun, excluding participants whose written responses were coded as Resolved, there emerged a notable, but not significant change in the pattern of results for students displaying a dismissive attachment pattern. Specifically, when the Resolved responses were removed, the average response times on the ES task were five times slower after the MIP compared to response times at baseline for participants with a dismissive attachment style. It is
important to note that these findings were not significant, but if methodological limitations were addressed in future studies, there is a possibility of revealing significant changes in response times from pre- to post-MIP. When the Resolved responses were removed, the increase in ES Shame word response times for those with a dismissive attachment style did not occur for ES Threat word response times, suggesting that shame was specifically induced in the MIP, and not simply negative mood.

Furthermore, at baseline, participants with a fearful attachment style demonstrated significantly more implicit shame than participants with a dismissive attachment style, while after the MIP there were no significant differences. The significant differences in implicit shame at baseline, but not after the MIP, align with previous research indicating that the deactivating defenses of individuals with dismissive attachment style are effective in low stress conditions only (Fraley & Shaver, 1997; Mikulincer et al., 2004). Once increased demand is placed on their cognitive and emotional resources, participants with a dismissive attachment are no longer able to block unwanted thoughts and prevent emotional arousal related to loss and separation (Mikulincer et al., 2004). Similarly, following the MIP in the current study, participants displaying a dismissive attachment pattern were possibly less able to block unwanted feelings of shame, resulting in the notable increase in implicit shame across time.

These results highlight the importance of assessing the level of resolution a participant experiences regarding a shame event (e.g., Is the participant still affected by the event?) when examining implicit shame, which ensures that only participants who wrote about an event that currently bothers them are included. Additionally, the results provide further evidence for the effectiveness of the MIP in inducing feelings of shame in participants who are likely to utilize deactivating strategies and attempt to disengage from the emotionality of the task. Due to the
difficulty assessing implicit shame in the current study, the following sections will focus primarily on the self-report measures.

_Secure Attachment Style and Self-Reported Shame_

One of the primary objectives in the present study was to investigate whether college students with different adult romantic attachment styles differ in self-reported state and trait shame in response to a shame-inducing writing exercise. To address this research question, state and trait shame were measured at baseline and after the MIP. Two measures of state shame were utilized: the SSGS and ESS. The SSGS examined the phenomenological or subjective experience of shame, such as feelings of smallness, worthlessness, and powerlessness (Marschall et al., 1994), while the ESS was used to identify the physiological, emotional, and social markers of shame experiences (Turner, 1998). Trait shame was assessed using the Internalized Shame Scale (ISS; Cook, 2001). The ISS assesses internalized shame, which is chronic and enduring shame affect that floods one’s identity with feelings of inferiority, inadequacy, and deficiency (Cook, 2001).

Overall, students with a secure attachment style reported significantly less state shame on the SSGS and ESS compared to students with an insecure attachment style (i.e., preoccupied, fearful, or dismissive) after the MIP. Similarly, participants with a secure attachment style displayed significantly less trait shame at baseline and following the MIP compared to participants with an insecure attachment style. Findings from the current study indicate that securely attached individuals experience lower levels of self-reported state and trait shame, which is consistent with findings from other studies that highlight the negative relationship between trait shame and the secure attachment style (Akbag et al., 1997; Gross & Hansen, 2000). It is likely that the stable positive sense of self and consistent use of constructive affect regulation strategies that...
typically characterize individuals displaying a secure attachment pattern (Mikulincer & Shaver, 2003) contributed to the low shame levels of these participants in the current study.

Interestingly, in the current study, securely attached individuals were the only participants who evidenced stable levels of state shame from baseline to after the MIP on both the SSGS and ESS (i.e., the MIP did not appear to alter their mood with regard to state shame). It might appear that a possible explanation for participants with a secure attachment style not showing significant changes in state shame could be that the MIP writing task was ineffective in inducing feelings of shame in these participants. However, exploration of securely attached participants’ scores on the rating scale revealed that the majority of these individuals experienced the mood induction as “very evocative,” and their ability to visualize themselves in the memory as “very easy.” These high rating scale scores suggest that the MIP was effective.

An alternative explanation is that the MIP writing task successfully induced feelings of shame, but students exhibiting a secure attachment style were more effective in coping with the feelings of shame. This explanation is supported by the current study’s pattern of findings for the maladaptive shame coping styles. Specifically, participants with a secure attachment style scored significantly lower on all four of the maladaptive shame coping styles compared to participants with an insecure attachment style, suggesting securely attached individuals developed healthier ways to cope with shame. This hypothesis is also supported by the extensive research documenting that individuals with a secure attachment styles believe emotional distress is manageable as opposed threatening; this adaptive view facilitates their ability to remain open to their emotions and express and communicate their feelings openly and accurately (e.g., Cassidy, 1994; Shaver & Mikulincer, 2002). These individuals do not typically need to engage in maladaptive coping strategies such as denying, heightening, or distorting their emotional
experience (Shaver & Mikulincer, 2009). As a result, in the current study, securely attached participants likely experienced feelings of shame, yet were able to manage these emotions adaptively; and therefore, did not show the significant increases in state shame as seen for participants with an insecure attachment style.

*Internal Working Models, State Shame, and Trait Shame*

Bartholomew and Horowitz’s conceptualization of internal working models (Bartholomew, 1990; Bartholomew & Horowitz, 1991) offers a helpful framework to understand the more nuanced findings of the current study. This theory of internal working models describes attachment patterns in terms of two underlying dimensions, model of the self (either positive or negative) and model of others (either positive or negative). These dimensions result in the four adult attachment styles: preoccupied (negative self, positive other), fearful (negative self, negative other), secure (positive self, positive other), and dismissive (positive self, negative other; Bartholomew, 1990). In this section, the results for attachment styles with a negative view of self will be addressed first followed by the results for the attachment styles characterized by a positive view of self.

When measuring the phenomenological aspects of shame at baseline and after the MIP, students with a preoccupied or fearful attachment style both endorsed more state shame than students with a secure attachment style. Similarly, at baseline and following the MIP, participants evidencing a preoccupied or fearful attachment style reported significantly more trait shame than participants evidencing a secure attachment style. The current study’s findings are supported by previous research which found that college students with a preoccupied or fearful attachment style were more shame-prone compared to college students with a secure attachment style (Lopez et al., 1997).
The current study’s findings as well as past research complement Bartholomew and Horowitz’s (1991) theory of internal working models. Specifically, the two types of attachment categories associated with a negative view of self are preoccupied and fearful. When an individual experiences feelings of shame, such an experience is precipitated by a negative evaluation of the whole self (Lewis, 2008). As such, maintenance of a working model composed of a negative view of the self would likely increase proneness to feelings of shame in individuals with a preoccupied or fearful attachment style. Additionally, students with a preoccupied attachment style tend to use a strategy of hyperactivation to regulate emotion. Sustaining negative affect to receive help and support from others is a common behavioral pattern associated with hyperactivation (Mikulincer & Shaver, 2003). Consequently, experiencing and maintaining feelings of shame may be useful in that it allows these individuals to receive help regulating emotion from others and to foster connection; thus, contributing to their higher reports of state and trait shame in the present study.

With regard to individuals with a secure or dismissive attachment pattern whose working model is composed of a positive view of self, it would be expected that these participants report similar low levels of state and trait shame at baseline and following the MIP. Contradictory to predictions, students with a dismissive attachment style reported significantly more state shame following the MIP compared to students with a secure attachment style. Similarly, participants evidencing a dismissive attachment style reported higher levels of trait shame than participants evidencing a secure attachment style at baseline and after the MIP.

Although, students with a secure or dismissive attachment style maintain a working model composed of a positive view of self, the positive view of self for individuals with dismissive attachment style tends to develop out of a need for self-protection, resulting in a more
defensive and fragile positive view of self (Fraley, Davis, & Shaver, 1998). Mikulincer and Shaver (2003) theorized that unlike securely attached individuals, individuals with a dismissive attachment style have two internal working models of the self; one is conscious, the other unconscious. The conscious working model maintains a positive sense of self, which involves the beliefs that the self is good, strong, and capable. The second model, the unconscious model, involves a sense that the self is flawed, dependent, and helpless. According to Mikulincer and Shaver (2003), strategies of deactivation are used to maintain the conscious model as a defense against the unconscious model. Ultimately, dismissively attached individuals actually have a deep distrust of their own worthiness, which is more similar to those with a preoccupied or fearful attachment pattern, leading them to be more prone to feelings of shame and score higher on state and trait shame than securely attached participants in the current study.

The relationship between trait shame and attachment style investigated in this study is consistent with research examining trait shame levels among a community sample of women with different adult attachment styles, who identified as lesbian (Wells & Hansen, 2003). Wells and Hansen (2003) found that high levels of trait shame were positively associated with the dismissive attachment style. Interestingly, as with the current study, Wells and Hansen utilized both the ISS to assess trait shame and a procedure that ensured high anonymity, in which participants were asked to complete the measures and return them to the researcher through the mail. This data collection procedure may have allowed participants to feel as though their responses were more private, enabling them to be more honest in their responding.

In contrast to the findings of Wells and Hansen (2003), a greater number of researchers have found no relationship or a negative relationship between dismissive attachment and shame. For example, Gross and Hansen (2000) conducted data collection in a group setting and found no
relationship between trait shame and the dismissive attachment style in a sample of college students. Similarly, in samples of Turkish undergraduates (Akbag & Imamoglu, 2010) and U.S. undergraduates (Lopez et al., 1997), who also completed shame measures in group settings, participants with higher levels of dismissive attachment also endorsed lower levels of trait shame.

The current study identifies a notable relationship between trait shame and those with a dismissive attachment style that other studies involving college students were unable to capture. When using the ISS, students with a dismissive attachment style reported higher levels of trait shame than students with a secure attachment style. There are two possible explanations for these unexpected findings.

First, the ISS may be a more sensitive measure of trait shame, particularly for participants who are more likely to display defensive responding, as is the case for students with a dismissive attachment pattern. A review of shame measures identified the ISS as the most developed measure of trait shame due to its strong reliability and validity and lower demand characteristics than other measures as it does not use the word “shame” (Harper, 2011). Not only is the ISS considered a stronger measure of trait shame; other measures have been identified as flawed in their attempt to assess trait shame. For example, Harper (2011) criticized the scenario-based measures used in previous research, because they measure a person’s responses to artificial situations rather than responses to lived experiences of shame. Second, the setting in which a participant completes shame measures may impact their willingness to disclose. Previous research found that participants are more likely to disclose honestly about shameful experiences if they are in an environment separate from other participants (MacDonald, 1998), such as the private room in the research lab used in the current study.
Discrepancies in State Shame Results

Currently, the limited research that exists examining the relationship between shame and attachment styles focuses solely on trait shame and neglects the unique relationship between state shame and the adult attachment styles. As such, a primary goal of the current study was to explore this relationship. Interestingly, some findings from the current study regarding state shame and attachment style varied based on the state shame measure examined. More specifically, students displaying a dismissive attachment style showed a significant increase in state shame from baseline to after the MIP on the SSGS, but not the ESS.

The lack of significant changes on the ESS when there were significant changes on the SSGS may be in part due to the way in which each measure assesses the experience of state shame. The ESS measures state shame by asking a participant to report about their shame reactions. More specifically, it asks participants to report about their physical (e.g., “Physically my heart beat feels normal to rapid”) and emotional experiences (“I feel content versus distressed”), as well as their desire to engage socially (“I feel like hiding vs. being sociable”). In contrast, the SSGS is composed of brief phenomenological descriptions of shame (e.g., “I feel small” or “I feel worthless”). Individuals with a dismissive attachment style tend to be less attuned to their physical and emotional experience (Shaver & Mikulincer, 2009), which is how the ESS assesses state shame. These participants may have not noticed the changes that signaled increases in state shame, and therefore, failed to report these changes on the ESS.

Additionally, it is possible that the two measures assessing state shame differ in their sensitivity, accounting for some of the variability in the results for students with a dismissive attachment pattern. The variability in state shame results highlights the complexity of the experience of shame as well as the challenge of assessing this emotion. The current study
provides a novel approach to the examination of state shame, and suggests that the way in which a measure assesses state shame as well as a measure’s specificity and/or sensitivity are important to consider when examining changes in state shame, particularly for those individuals who may not be as attuned to their internal experience.

**Bidirectional Relationship between State and Trait Shame**

It was predicted that there would be no significant changes in trait shame by adult attachment styles from baseline to post-MIP. This prediction was only partially supported, as both participants with a preoccupied or fearful attachment style showed significant increases on trait shame from baseline to after the MIP. The findings regarding trait shame highlight the bidirectional relationship that may exist between trait and state shame such that frequently experiencing state shame is likely to increase a person’s internalized shame (i.e., trait shame), and an individual with high trait shame is more prone to experience high levels of state shame in a shame-inducing situation.

Schore’s theory regarding unregulated shame provides some support for this explanation. Specifically, Schore (1994) theorized that frequent experiences of unregulated state shame contribute to a person’s likelihood of developing a sense of internalized shame (i.e., trait shame), particularly in the context of one’s relationships with caregivers. In the case of adults with a secure attachment style, their caregivers were generally responsive and helped them manage their feelings of shame. In contrast, a preoccupied or fearful attachment pattern develops as a consequence of a caregiver being unreliable and/or unavailable, and fails to consistently help a child effectively regulate emotion (Main & Hesse, 1990). As a result, individuals evidencing these attachment patterns may have more experiences of state shame feeling overwhelming and unmanageable, resulting in increased internalization of shame affect (i.e., higher trait shame).
Although no previous studies examining adult attachment styles included measures of both state and trait shame, an analysis of the anxiety literature identified a similar pattern for state and trait anxiety. Specifically, individuals with higher trait anxiety tended to experience increased state anxiety during the high-pressure testing conditions (Horikawa & Yagi, 2012). In the present study, the change in trait shame suggests that a student’s state shame may increase her self-reported trait shame; thus, highlighting the bidirectional nature of the relationship between state and trait shame.

*Shame Coping Styles at Baseline*

After careful examination of the literature, no studies to date were found exploring attachment classification differences in how individuals cope with and defend against feelings of shame. Elison et al. (2006b) suggested that the experience of shame does not necessarily negatively affect a person’s wellbeing, but instead one’s wellbeing is negatively impacted by a person’s *response* to the experience of shame. Consequently, the current study explored attachment classification differences in relation to the CoSS maladaptive shame coping styles: Attack Self, Attack Other, Withdrawal, Avoidance.

Within the current study, a pattern emerged at baseline suggesting that students evidencing a preoccupied or fearful attachment pattern engage in more maladaptive shame coping behaviors than students evidencing a secure attachment pattern, even after controlling for impression management (the pattern for individuals with a dismissive attachment style was more inconsistent). Considering Nathanson (1992), who theorized that the use of maladaptive shame coping styles tends to involve reducing, ignoring, and/or magnifying feelings of shame, without addressing the source, one would anticipate individuals with an insecure attachment to be more prone to cope with shame in these ways. Moreover, constructive shame management occurs
when individuals allow themself to feel shame, acknowledge it, and directly address the source (Nathanson, 1992), a pattern of emotional regulation that is more likely to be associated with a secure attachments style (Cassidy, 1994).

**Attack Self and Attack Other coping styles.** With regard to the Attack Self shame coping style, consistent with predictions, individuals with a preoccupied, fearful, or dismissive attachment style were significantly more likely to respond to shame with contempt or criticism directed at the self as compared to individuals with a secure attachment style. When compared to students evidencing a dismissive attachment style, students with a preoccupied attachment style were also significantly more likely to utilize Attack Self to cope with shame. The Attack Self coping style is more commonly used by individuals for whom the feelings of apartness and alienation associated with shame are particularly challenging to endure (Nathanson, 1992). This theme is consistent with individuals with a preoccupied or fearful attachment style scoring highest on this shame coping style in the current study. In addition, individuals with a dismissive attachment style typically utilize a pattern of deactivation to cope with painful emotion (Mikulincer, 1998). One of the primary goals of deactivation is to maintain a positive view of self (Mikulincer & Shaver, 2003), which likely contributes to those with a dismissive attachment style engaging in significantly less conscious self-deprecation than those with a preoccupied attachment style.

With regard to the Attack Other coping style, individuals with a preoccupied or fearful attachment style were significantly more likely to respond to shame by belittling or criticizing the person/people involved in the shame-inducing situation compared to individuals with a dismissive or secure attachment style. An individual engaging in the Attack Other strategy to cope with shame likely experiences feelings of anger, as the behavioral response associated with
this strategy is to become irritated with, or verbally attack, the person they view as the source of their shame. Cassidy (1994) suggested that the experience of anger implies emotional involvement and even investment in a relationship. Students with a dismissive attachment style may be less willing to acknowledge emotional investment and involvement in a relationship, and as such, report less anger in their relationships (Mikulincer, 1998b; Mikulincer & Shaver, 2003). This previous research aligns with the current study’s findings that individuals with a dismissive attachment style were less likely to engage in the Attack Other strategy than individuals with a preoccupied or fearful attachment style.

In order to gain a more nuanced understanding of the relationship between the ways a person copes with shame and how they choose to present themselves (i.e., impression management) the correlations between the shame coping styles and impression management were examined more closely. Interestingly, although all of the correlations were small but negative, there was a medium correlation between Attack Other and impression management. Ultimately, the higher a participant scored on impression management, the less likely the participant was to report blaming or criticizing others when they experience feelings of shame. A possible explanation for this pattern is that participants are less likely to want to endorse the behaviors associated with the Attack Other shame coping style because these responses to shame may seem less socially acceptable compared to behaviors associated with the other shame coping styles. For instance, on the item “At times when I am unhappy with how I look…” the response corresponding to Attack Other is “I take it out on other people,” whereas the response for Withdrawal is “I keep away from other people”. In this example, a participant may be less likely to want to acknowledge blaming or taking their feelings out on others as opposed to distancing themselves from social situations.
Withdrawal and Avoidance coping styles. As predicted, students with a preoccupied, fearful, or dismissive attachment scored significantly higher on the Withdrawal coping style compared to students with a secure attachment. In contrast to predictions, group differences among the adult attachment classifications were only approaching significance for the Avoidance coping style. Although there was not a significant difference for the Avoidance coping style overall, individuals with a preoccupied attachment style reported significantly higher levels of Avoidance compared to individuals with a secure attachment style. Unexpectedly, individuals with a dismissive attachment style did not score significantly higher on the Avoidance shame coping style compared to participants evidencing the other three attachment styles. Further, the most commonly endorsed shame coping style for students with a dismissive attachment pattern was Withdrawal.

One potential explanation for the unexpected pattern with Avoidance, Withdrawal, and individuals with a dismissive attachment style pertains to the definition of each construct. The Avoidance subscale involves the person attempting to distract, dissociate, or disconnect the self and others from their shame, whereas Withdrawal involves trying to withdraw and/or hide from the situation or other person involved in the shame triggering event (Nathanson, 1992). Both of these behavioral patterns fit the construct of attachment avoidance, which reflects the extent to which a person distrusts others’ goodwill and strives to maintain independence and emotional distance, particularly when experiencing negative emotions such as sadness and shame (Fraley & Shaver, 2000). With this definition of attachment avoidance in mind, Withdrawal, as the most highly endorsed maladaptive shame coping style for participants evidencing a dismissive attachment style, the finding supports the idea that these individuals tend to rely on avoidant strategies to regulate emotion (Mikulincer & Shaver, 2003). Further, Tangney (1993) suggested
that shame is often regulated by avoidant techniques such as a desire to hide or escape, which fits with the Withdrawal definition. Ultimately, the Withdrawal subscale aligns with the strategies associated with attachment avoidance, thus clarifying why this is the most common maladaptive shame coping style for participants with a dismissive attachment style.

An alternative explanation for participants with a dismissive attachment style scoring lower than expected on avoidance when compared to individuals displaying the other attachment styles pertains to the relative hyperactivation strategy likely used by the participants with a preoccupied attachment style. Specifically, students with a preoccupied attachment style exhibited the highest scores on all four maladaptive shame coping styles. These findings may be in part due to the way in which impression management was measured and controlled for in the current study and/or the tendency for the individuals with a preoccupied attachment to sustain negative affect (Milulincer & Shaver, 2003).

With regard to impression management, the BIDR impression management subscale only captures participants trying to “fake good” by endorsing desirable behaviors that are uncommon (e.g., “I have never dropped litter on the street.”); the subscale does not account for participants trying to present themselves in a more negative light. While it is likely individuals with a preoccupied attachment style engage in many of these maladaptive shame coping styles, the pattern of high scores for this group may be partially explained by the hyperactivation strategy in which they typically engage to regulate emotion (Shaver & Mikulincer, 2002).

Hyperactivation may involve a tendency to exaggerate negative emotions, such as shame, which could be perceived as an attempt to portray the self in a worse light. Consequently, the impression management subscale accounted for the possible tendency of participants with a dismissive attachment pattern to “fake good” and failed to control for the possible tendency of
participants with a preoccupied attachment pattern to “fake bad.” Alternatively, hyperactivation can also involve regulating emotion by sustaining negative emotions and/or engaging in negative, global evaluations designed to elicit help from others regulating their affect (Mikulincer & Shaver, 2003). These aspects of hyperactivation may increase a person’s shame-proneness, resulting in students with a preoccupied attachment pattern scoring the highest on all of the maladaptive shame coping styles simply because they experience the most shame.

Finally, an additional pattern that emerged was securely attached participants generally scoring significantly lower on all four maladaptive shame coping styles compared to insecurely attached participants. This pattern of results aligns with research indicating that securely attached individuals are typically able to remain open to their emotions, communicate their feelings to others accurately, and experience their thoughts and emotions fully (Shaver & Mikulincer, 2009). As a result, it is not necessary for students with a secure attachment style to utilize maladaptive shame coping styles to the same degree as students with an insecure attachment style.

Clinical Implications

The current findings highlight the variability in the experience of state and trait shame as well as the use of maladaptive shame coping styles across college students with different attachment styles. Generally, individuals with an insecure attachment style reported significantly more state and trait shame than individuals with a secure attachment style. Additionally, individuals with a preoccupied or fearful attachment endorsed greater use of the maladaptive shame coping styles when compared to people with a secure attachment style. Thus, movement towards a more secure attachment would likely be a primary focus in therapy as a way to reduce a client’s proneness to shame, increase a client’s use of healthier strategies to cope with state
shame, and ultimately, decrease the likelihood of a client internalizing shame affect. As such, identifying a client’s attachment style through an in-depth exploration of a client’s working model of self and other would be a helpful initial step in the therapy process. Alternatively, a client could complete the ECR at the beginning of therapy to provide information about their attachment style.

Notably, despite individuals with a dismissive attachment style maintaining a conscious working model composed of a positive view of the self, the current findings highlight the presence of an unconscious view of self that experiences the self as flawed. Specifically, participants with a dismissive attachment style reported more state and trait shame than participants with a secure attachment style. These findings emphasize the importance in therapy of differentiating between the positive view of self that characterizes clients with a secure attachment style and the more fragile, defensive positive view of self that is displayed by clients with a dismissive attachment style. Based on the current findings, aiding a client in recognizing when they are experiencing shame and engaging in maladaptive shame coping strategies in the room would also be an important element of therapy. This process offers the opportunity for a therapist to aid their client in affect regulation, ideally preventing internalization of shame affect.

Moreover, understanding a client’s attachment style would likely help therapists anticipate how a client might respond to feelings of shame in the context of the therapeutic relationship. For example, individuals with a preoccupied attachment style were more likely than others to engage in the Attack Self coping strategy. When a client with a preoccupied attachment style engages in self-critical or self-deprecating statements (e.g., “I am worthless”) as they are experiencing state shame, a therapist could label the affect as shame, process how the client is trying to cope with the shame in the moment, and help the client try healthier ways to cope with
feelings of shame. A key part of this process is to first provide empathy for the defense (e.g., “It makes sense you use this strategy to cope with shame because it served a purpose at one time”), instead of pointing it out in a way that results in shame about the maladaptive coping style (Cook, 2001). It is essential that shifting a client’s maladaptive shame coping styles occurs in the context of a safe and supportive therapeutic relationship.

Lastly, couples and family therapy could also benefit from current findings. The two most common groups of people identified in participants’ written responses about a shameful event were romantic partners and family members for individuals with a preoccupied, fearful, or secure attachment style. Couples and family therapy could offer the space for a healing interaction to occur as related to shame-inducing events. Additionally, couples and family therapy would provide the opportunity to develop healthier patterns of relating within the context of important relationships.

Limitations

The contribution of the current findings must be examined in light of some of its limitations. Regarding the sample, approximately 75% of the participants were women. A meta-analysis of gender differences in self-conscious emotional experiences indicated a small effect for gender in relation to shame (Else-Quest, Higgins, Alllison, & Morton, 2012). Oversampling men would improve the generalizability of the findings. Although the sample was relatively diverse in terms of racial/ethnic diversity, with 56% of the sample identifying as an ethnic minority, only 12% of the sample identified as a sexual minority. Recruiting a more diverse sample of participants, particularly related to race/ethnicity and sexual identity, would improve the generalizability of the findings and allow for the examination of shame in the context of one’s cultural experience.
Additionally, the ECR asks a participant to respond to questions about how they feel in romantic relationships. In the current sample, 29 of participants indicated that they were never in a romantic relationship. These participants’ responses on the ECR may not have been as valid simply because they have not been in a romantic relationship. As a result, they may have answered based on how they think they might feel and act in a relationship. Future researchers using the ECR may want to include only participants who have been in at least one romantic relationship. This change is particularly important given that participants in the current study identified romantic partners as one of the most common social agents involved in shame-inducing events.

An important aim of the current study was to potentially assess implicit shame by using an Emotional Stroop task. Few significant results related to implicit shame were identified using the Emotional Stroop task; therefore, a discussion of how to improve the Emotional Stroop task is provided. One factor that may have impacted the likelihood of finding differences in response times from baseline to post-MIP was the number of practice trials (i.e., words). Participants completed only 10 practice trials, a number that was based on the design of Mikulincer et al.’s (2004) study, and intended to reduce participant burden.

In contrast, other studies with the Emotional Stroop task included 90 to 100 practice trials (i.e., words) to ensure a participant’s performance plateaued before introducing the experimental trials (Frings et al., 2010). In the current study, it is likely that participants were still learning the Emotional Stroop task when the experimental trials started, which may have contributed to the lack of significant differences in implicit shame at baseline and following the MIP. Additionally, participants still adjusting to the task when the experimental trials started may explain the high level of variability within the Emotional Stroop response times. Future research should include
more practice trials to ensure participants are fully orientated to the task, and ideally reduce variability in performance, before proceeding with the experimental trials.

Another factor that may have contributed to the lack of significant differences in implicit shame was the number of experimental trials (excluding the practice trials discussed above), which affects the length of each block (i.e., group of emotion words). Other studies utilizing the Emotional Stroop task typically included 160 to 190 experimental trials (Frings et al., 2010; Mikulincer et al., 2004), more than double the number of trials in the current study. It is possible that because there were fewer trials, the blocks were not long enough to detect the shift in participants’ response times that would indicate the subtle shifts in implicit shame. Increasing the number of experimental trials in future studies may improve the Emotional Stroop tasks ability to detect differences between blocks of different emotionally valenced words (e.g., neutral, shame, threat).

Finally, it is important to consider the list of shame words utilized for the Emotional Stroop task. A validated list of shame words does not exists in the literature, as such Sabag-Cohen (2009) compiled a list of shame words using the shame literature and online searches that were then rated for face validity and measured for inter-rater agreement. Although the list of shame words was carefully created, further development and validation of the list of shame words may increase the ability of the Emotional Stroop task to tap into implicit shame.

Another potential limitation in the current study was the particular writing task that served as the MIP. Due to the absence of a well-validated MIP in the shame literature, the writing task was designed specifically for the current study. The writing task was piloted and edited thoroughly to try to evoke strong feelings of shame, participants generally endorsed the task as “evocative”, and there was a significant increase across time in self-reported state shame for individuals with
an insecure attachment style. Participants, however, generally reported relatively low levels of state and trait shame following the MIP. The MIP was designed specifically for this study; therefore, there was no prior evidence that could substantiate its validity. This limitation could be corrected by conducting a more rigorous pilot study, which could possibly allow for the replication of this study. Additionally, because shame is associated with depression, post-traumatic stress disorder, and other psychological disorders (Black et al., 2013), utilizing a clinical sample rather than a non-clinical sample may show greater change in implicit shame and self-reported state shame.

Future Research Directions

The current findings and limitations illuminate directions for future research. First, a novel Emotional Stroop task was utilized in this study in an attempt to measure implicit shame. As discussed in the “Limitations Section”, due to the high variability within the response times, it was difficult for the Emotional Stroop task to detect subtle changes in response time that might indicate shifts in implicit shame. Future research that focuses on validation of the Emotional Stroop task specific to shame is required to increase its sensitivity and ability to detect possible differences in implicit shame levels.

Second, due to the disproportionate number of women in the sample, gender differences were unable to be examined. It is important for future research to consider the role of gender in the experiences a college student might identify as shameful. Future research could oversample men, which would allow for an examination of gender differences in the most commonly identified shameful experiences.

Third, future studies may want to examine in more depth the way in which participants with different attachment styles write about shameful experiences. The Resolved code was utilized in

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the current study to identify participants who wrote about a shameful event that no longer seemed to bother them (despite the instructions requesting otherwise). This code was limited because it required the coder to take the participant’s writing at face value; that is, if a participant stated they had recovered from the event, it was coded as such, despite some of the ways in which people described seeking closure being less psychologically healthy (e.g., no longer sharing their feelings with others because of the shameful experience). Future research could explore not only if a person says they are no longer bothered by the event, but also whether there were shifts toward healthier functioning. Healthier functioning may be important to consider because a participant who writes about an event that he/she resolved in a more psychologically healthy way is predicted to be less likely to experience the mood induction compared to a participant whose resolution is characterized by less psychological health.

Finally, the list of most common shame-inducing experiences for college students could be used to inform the development of a more standardized mood induction procedure. In past research, scenarios designed to trigger feelings of shame produced inconsistent and often minimal effects (e.g., Sabag-Cohen, 2009). Future researchers could use the most common shame experiences identified in the current study to inform the development of a scenario to induce feelings of shame. The creation of a scenario that all participants experience as shame-inducing would provide further standardization of the experimental conditions and control for more extraneous variable
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<td>19.6%</td>
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<td>33.9%</td>
<td>12</td>
<td>21.4%</td>
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<td>10</td>
<td>23.8%</td>
<td>15</td>
<td>35.7%</td>
</tr>
</tbody>
</table>

Notes: The percentages in the columns for each attachment style refers to % of each demographic characteristic composed of each attachment style. For example, within the female subsample 22.4% were secure, 28.1% preoccupied, 19.4% dismissive and 30.1% were fearful.
Table 2

Demographic Characteristics for Continuous Variables by Attachment Style (N = 265)

<table>
<thead>
<tr>
<th></th>
<th>Total M (SD)</th>
<th>Total n</th>
<th>Secure M (SD)</th>
<th>Secure n</th>
<th>Preoccupied M (SD)</th>
<th>Preoccupied n</th>
<th>Dismissive M (SD)</th>
<th>Dismissive n</th>
<th>Fearful M (SD)</th>
<th>Fearful n</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>20.05 (3.05)</td>
<td>58</td>
<td>20.71 (5.0)</td>
<td>6</td>
<td>19.63 (1.88)</td>
<td>52</td>
<td>20.80 (2.85)</td>
<td>76</td>
<td>19.46 (1.66)</td>
<td>76</td>
<td>3.05</td>
<td>.016</td>
</tr>
<tr>
<td>Number of Romantic</td>
<td>1.89 (1.39)</td>
<td>58</td>
<td>1.84 (1.02)</td>
<td>6</td>
<td>2.13 (1.45)</td>
<td>52</td>
<td>1.92 (1.64)</td>
<td>76</td>
<td>1.67 (1.37)</td>
<td>76</td>
<td>1.43</td>
<td>.236</td>
</tr>
<tr>
<td>Relationships</td>
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</tr>
<tr>
<td>GPA</td>
<td>3.20 (.52)</td>
<td>44</td>
<td>3.31 (.47)</td>
<td>44</td>
<td>3.13 (.53)</td>
<td>46</td>
<td>3.23 (.54)</td>
<td>46</td>
<td>3.18 (.52)</td>
<td>46</td>
<td>1.13</td>
<td>.338</td>
</tr>
<tr>
<td>Impression Management</td>
<td>7.39 (3.38)</td>
<td>58</td>
<td>7.79 (3.30)</td>
<td>79</td>
<td>6.75 (3.56)</td>
<td>52</td>
<td>8.15 (3.29)</td>
<td>76</td>
<td>7.22 (3.23)</td>
<td>76</td>
<td>2.20</td>
<td>.088</td>
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</table>

*Note: Sample size equals 265 except for GPA, which was 222, due to 43 first-semester freshmen without GPAs yet.
Table 3
Correlation Matrix for Dependent Variables

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<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
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</thead>
<tbody>
<tr>
<td>1. ES RTs Pre</td>
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<td></td>
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<td></td>
<td></td>
</tr>
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<td>2. ES RTs Post</td>
<td>.061</td>
<td>-</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3. ESS Pre</td>
<td>.017</td>
<td>-.001</td>
<td>-</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>4. ESS Post</td>
<td>-.017</td>
<td>.108</td>
<td>.643**</td>
<td>-</td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>5. SSGS Pre</td>
<td>.011</td>
<td>-.016</td>
<td>.531**</td>
<td>.337**</td>
<td>-</td>
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<td></td>
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<tr>
<td>6. SSGS Post</td>
<td>.026</td>
<td>.074</td>
<td>.441**</td>
<td>.692**</td>
<td>.514**</td>
<td>-</td>
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<tr>
<td>7. ISS Pre</td>
<td>-.006</td>
<td>.043</td>
<td>.544**</td>
<td>.543**</td>
<td>.589**</td>
<td>.619**</td>
<td>-</td>
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<tr>
<td>8. ISS Post</td>
<td>.052</td>
<td>.098</td>
<td>.553**</td>
<td>.651**</td>
<td>.551**</td>
<td>.773**</td>
<td>.904**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9. Avoidance</td>
<td>.051</td>
<td>.082</td>
<td>.073</td>
<td>.174**</td>
<td>.129*</td>
<td>.182**</td>
<td>.278**</td>
<td>.297**</td>
<td>-</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10. Attack Self</td>
<td>.027</td>
<td>-.003</td>
<td>.467**</td>
<td>.436**</td>
<td>.462**</td>
<td>.504**</td>
<td>.768**</td>
<td>.772**</td>
<td>.371**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11. Withdrawal</td>
<td>.036</td>
<td>-.001</td>
<td>.453**</td>
<td>.424**</td>
<td>.439**</td>
<td>.444**</td>
<td>.699**</td>
<td>.709**</td>
<td>.335**</td>
<td>.793**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Attack Other</td>
<td>.097</td>
<td>.095</td>
<td>.345**</td>
<td>.322**</td>
<td>.337**</td>
<td>.345**</td>
<td>.528**</td>
<td>.521**</td>
<td>.398**</td>
<td>.547**</td>
<td>.588**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>13. IM</td>
<td>-.045</td>
<td>.010</td>
<td>-.131*</td>
<td>-.103</td>
<td>-.146*</td>
<td>-.085</td>
<td>-.205**</td>
<td>-.179**</td>
<td>-.159**</td>
<td>-.156*</td>
<td>-.159**</td>
<td>-.352**</td>
<td>-</td>
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</tbody>
</table>

** Correlation is significant at the 0.01 level. * Correlation is significant at the 0.05 level. Note. 1 = ES Shame Pre; 2 = ES Shame Post; 3 = Experiential Shame Scale Pre; 4 = Experiential Shame Scale Post; 5 = State Shame and Guilt Scale Pre; 6 = State Shame and Guilt Scale Post; 7 = Internalized Shame Scale Pre; 8 = Internalized Shame Scale Post; 9 = Compass of Shame Scale: Avoidance; 10 = Compass of Shame Scale: Attack Self; 11 = Compass of Shame Scale: Withdrawal; 12 = Compass of Shame Scale: Attack Other; 13 = Impression Management.
Table 4
Descriptives for the Rating Scale by Attachment Style (N = 265)

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>Total</th>
<th>Secure</th>
<th>Preoccupied</th>
<th>Dismissive</th>
<th>Fearful</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>Median</td>
<td>(SD)</td>
<td>M</td>
<td>(SD)</td>
</tr>
<tr>
<td>Evocative</td>
<td>5.48</td>
<td>6</td>
<td>(1.34)</td>
<td>5.34</td>
<td>(1.36)</td>
</tr>
<tr>
<td>Visualize</td>
<td>6.05</td>
<td>6</td>
<td>(1.13)</td>
<td>5.97</td>
<td>(1.17)</td>
</tr>
<tr>
<td>Shame</td>
<td>3.26</td>
<td>3</td>
<td>(2.11)</td>
<td>2.47a,c</td>
<td>(1.81)</td>
</tr>
</tbody>
</table>

*Note: Means with different subscripts differ significantly at p < .05 or greater. **p < .001, * p < .01, † p < .10*
Table 5

Descriptives for ES RTs Pre- and Post-MIP among Attachment Classifications

<table>
<thead>
<tr>
<th>Attachment Style</th>
<th>ES Shame Response Times</th>
<th>ES Threat Response Times</th>
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<tbody>
<tr>
<td></td>
<td>Pre-MIP</td>
<td>Post-MIP</td>
</tr>
<tr>
<td>Secure</td>
<td>M</td>
<td>(SD)</td>
</tr>
<tr>
<td></td>
<td>17.86</td>
<td>(170.21)</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>24.98</td>
<td>(202.54)</td>
</tr>
<tr>
<td>Dismissive</td>
<td>-14.60</td>
<td>(227.36)</td>
</tr>
<tr>
<td>Fearful</td>
<td>52.38</td>
<td>(251.40)</td>
</tr>
<tr>
<td>Total</td>
<td>23.51</td>
<td>(216.45)</td>
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</table>

Note: The unit of measurement was milliseconds.
Table 6
Descriptives for the SSGS Pre- and Post-MIP among Attachment Styles

<table>
<thead>
<tr>
<th>Attachment Style</th>
<th>SSGS Pre-MIP</th>
<th>SSGS Post-MIP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Secure</td>
<td>6.17b (.2.23)</td>
<td>6.55b (3.27)</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>7.94c (2.58)</td>
<td>a 9.99c (4.52)</td>
</tr>
<tr>
<td>Dismissive</td>
<td>7.41 (3.37)</td>
<td>a 8.85c (4.47)</td>
</tr>
<tr>
<td>Fearful</td>
<td>8.12c (3.40)</td>
<td>a 10.64c (5.20)</td>
</tr>
<tr>
<td>Total</td>
<td>7.50 (3.01)</td>
<td>a 9.20 (4.72)</td>
</tr>
</tbody>
</table>

Note: Means with different subscripts differ significantly at p < .05 or greater. ‘a’ is equivalent to a significant difference across time within attachment style from pre- to post-MIP. For example, SSGS scores for individuals with a preoccupied attachment style significantly increased from baseline to after the MIP. ‘b’ and ‘c’ indicate differences between attachment styles at a particular time point.
Table 7  
*Descriptives for the ESS Pre- and Post-MIP among Adult Attachment Styles*

<table>
<thead>
<tr>
<th>Attachment Style</th>
<th>ESS Pre-MIP</th>
<th>ESS Post-MIP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Secure</td>
<td>2.71b (.92)</td>
<td>2.64b (.90)</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>3.16c (1.00)</td>
<td>a 3.51c (1.30)</td>
</tr>
<tr>
<td>Dismissive</td>
<td>3.10 (1.01)</td>
<td>3.27c (1.25)</td>
</tr>
<tr>
<td>Fearful</td>
<td>3.10 (.91)</td>
<td>a 3.44c (1.20)</td>
</tr>
<tr>
<td>Total</td>
<td>3.03 (.97)</td>
<td>a 3.25 (1.22)</td>
</tr>
</tbody>
</table>

*Note:* Means with different subscripts differ significantly at p < .05 or greater. 'a' is equivalent to a significant differences across time within an attachment style from pre- to post-MIP. ‘b’ and ‘c’ indicate differences between attachment styles at a particular time point.
Table 8  
*Descriptives for Trait Shame Pre- and Post-MIP among Attachment Classifications*

<table>
<thead>
<tr>
<th>Attachment Style</th>
<th>(N = 265)</th>
<th>Pre-MIP</th>
<th>Post-MIP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
</tr>
<tr>
<td>Secure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure</td>
<td>16.60b (12.11)</td>
<td>16.74b (13.56)</td>
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</tr>
<tr>
<td>Preoccupied</td>
<td>37.00c (15.59)</td>
<td>a 40.80d (18.33)</td>
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<tr>
<td>Dismissive</td>
<td>32.58c (18.35)</td>
<td>30.85c (21.14)</td>
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<tr>
<td>Fearful</td>
<td>36.22c (19.61)</td>
<td>a 38.96cd (22.19)</td>
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</tr>
<tr>
<td>Total</td>
<td>31.45 (18.50)</td>
<td>a 33.05 (21.28)</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* Means with different subscripts differ significantly at p < .05 or greater. ‘a’ is equivalent to a significant difference across time within attachment style from pre- to post-MIP. For example, trait shame for individuals with a preoccupied attachment style significantly increased from baseline to after the MIP. ‘b’, ‘c’, and ‘d’ indicate differences between attachment styles.
Table 9

MANOVA Comparing Adult Attachment Style on Baseline Implicit, State, and Trait Shame (N = 265)

<table>
<thead>
<tr>
<th>Source Variance</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>Partial η²</th>
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</thead>
<tbody>
<tr>
<td>Multivariate group effects</td>
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<td></td>
</tr>
<tr>
<td>Group (Attachment Style)</td>
<td>12,682.90</td>
<td>5.25</td>
<td>&gt; .001</td>
<td></td>
<td>.075</td>
<td></td>
</tr>
<tr>
<td>Univariate group effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ES Shame RT Pre</td>
<td>140877.97</td>
<td>3, 261</td>
<td>46959.33</td>
<td>1</td>
<td>.392</td>
<td>.011</td>
</tr>
<tr>
<td>ESSpre</td>
<td>7.99</td>
<td>3, 261</td>
<td>2.66</td>
<td>2.89</td>
<td>.036</td>
<td>.032</td>
</tr>
<tr>
<td>SSGSpre</td>
<td>148.21</td>
<td>3, 261</td>
<td>49.40</td>
<td>5.73</td>
<td>.001</td>
<td>.062</td>
</tr>
<tr>
<td>ISSpre</td>
<td>17015.69</td>
<td>3, 261</td>
<td>5671.90</td>
<td>20.19</td>
<td>&gt; .001</td>
<td>.188</td>
</tr>
</tbody>
</table>
Table 10
Repeated Measures ANOVA for Trait Shame by Adult Attachment Style (N = 265)

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>196.01</td>
<td>1</td>
<td>196.01</td>
<td>4.93</td>
<td>.027</td>
<td>.019</td>
</tr>
<tr>
<td>Time x Attachment Style</td>
<td>590.28</td>
<td>3</td>
<td>196.76</td>
<td>4.95</td>
<td>.002</td>
<td>.054</td>
</tr>
<tr>
<td>Error</td>
<td>10369.31</td>
<td>261</td>
<td>39.73</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 11
Descriptives for ES Shame RTs Pre- and Post-MIP with Resolved Responses Removed

| Attachment Style | \( N \) | ES Shame Words | | | | ES Threat Words | | | |
|------------------|--------|----------------|---|---|----------------|---|---|----------------|---|---|
|                  |        | Pre-MIP | (SD) | Post-MIP | (SD) | Pre-MIP | (SD) | Post-MIP | (SD) |
| Secure           | 48     | 19.44   | (180.13) | 22.89 | (224.33) | 56.11 | (200.71) | 14.34 | (239.80) |
| Preoccupied      | 74     | 25.86   | (205.61) | 34.05 | (134.75) | 12.03 | (147.41) | 48.73 | (196.32) |
| Dismissive       | 35     | -38.85  | (211.45) | 4.22  | (214.56) | 93.65 | (175.82) | 44.58 | (163.31) |
| Fearful          | 69     | 62.75   | (249.12) | 60.38 | (153.36) | 52.42 | (189.73) | 52.33 | (179.61) |
| Total            | 226    | 25.74   | (216.99) | 35.10 | (175.63) | 46.36 | (178.27) | 41.88 | (196.24) |

*Note: The unit of measurement was milliseconds.*
<table>
<thead>
<tr>
<th>Shame Coping Styles</th>
<th>Total</th>
<th>Secure</th>
<th>Preoccupied</th>
<th>Dismissive</th>
<th>Fearful</th>
<th>F (covariate)</th>
<th>Clinical Cut Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawal</td>
<td>49.96 (9.97)</td>
<td>42.88 (7.99)</td>
<td>52.99 (8.68)</td>
<td>50.36 (10.34)</td>
<td>51.94 (9.883)</td>
<td>14.57**</td>
<td>4.74* 21</td>
</tr>
<tr>
<td>Attack Self</td>
<td>49.93 (9.94)</td>
<td>43.75 (7.64)</td>
<td>53.34 (9.14)</td>
<td>48.84 (9.70)</td>
<td>51.84 (10.30)</td>
<td>11.12**</td>
<td>3.95* 24</td>
</tr>
<tr>
<td>Attack Other</td>
<td>49.88 (10.05)</td>
<td>47.27 (8.53)</td>
<td>53.42 (10.31)</td>
<td>46.72 (9.43)</td>
<td>51.12 (9.87)</td>
<td>6.59**</td>
<td>30.85** 18</td>
</tr>
<tr>
<td>Avoidance</td>
<td>50.05 (10.07)</td>
<td>47.62 (9.63)</td>
<td>52.29 (9.78)</td>
<td>48.21 (10.46)</td>
<td>50.83 (9.98)</td>
<td>2.59</td>
<td>4.81* 16</td>
</tr>
</tbody>
</table>

*Note:* Means with different subscripts differ significantly by $p < .05$ or greater. **$p < .001$, *$p < .05$ Clinical cut off for the CoSS subscales $\geq 65$. 
Table 13
*Descriptives for Written Response Codes by Attachment Style*

<table>
<thead>
<tr>
<th>Qualitative Code</th>
<th>Total</th>
<th>Secure</th>
<th>Preoccupied</th>
<th>Dismissive</th>
<th>Fearful</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
</tr>
<tr>
<td>Shame Code</td>
<td>271</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shame</td>
<td>265</td>
<td>97.80%</td>
<td>58</td>
<td>98.30%</td>
<td>79</td>
<td>98.80%</td>
</tr>
<tr>
<td>Not Shame</td>
<td>6</td>
<td>2.20%</td>
<td>1</td>
<td>1.70%</td>
<td>1</td>
<td>1.30%</td>
</tr>
<tr>
<td>Nature of Response Code</td>
<td>265</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>244</td>
<td>92.10%</td>
<td>53</td>
<td>91.40%</td>
<td>74</td>
<td>93.70%</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>21</td>
<td>7.90%</td>
<td>5</td>
<td>8.60%</td>
<td>7</td>
<td>6.30%</td>
</tr>
<tr>
<td>Social Agent Code</td>
<td>244</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ex-) Romantic Partner</td>
<td>58</td>
<td>23.80%</td>
<td>11</td>
<td>20.80%</td>
<td>22</td>
<td>29.70%</td>
</tr>
<tr>
<td>Rom Interest</td>
<td>16</td>
<td>6.60%</td>
<td>3</td>
<td>5.70%</td>
<td>7</td>
<td>9.50%</td>
</tr>
<tr>
<td>Friends</td>
<td>31</td>
<td>12.70%</td>
<td>9</td>
<td>17.00%</td>
<td>9</td>
<td>12.20%</td>
</tr>
<tr>
<td>Peers</td>
<td>42</td>
<td>17.20%</td>
<td>9</td>
<td>17.00%</td>
<td>9</td>
<td>14.90%</td>
</tr>
<tr>
<td>Family</td>
<td>74</td>
<td>30.30%</td>
<td>16</td>
<td>30.20%</td>
<td>19</td>
<td>25.70%</td>
</tr>
<tr>
<td>Non-Parental Adult</td>
<td>23</td>
<td>9.40%</td>
<td>5</td>
<td>9.40%</td>
<td>6</td>
<td>8.10%</td>
</tr>
<tr>
<td>Performance Code</td>
<td>265</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>47</td>
<td>17.70%</td>
<td>8</td>
<td>13.80%</td>
<td>12</td>
<td>15.20%</td>
</tr>
<tr>
<td>No Performance</td>
<td>218</td>
<td>82.30%</td>
<td>50</td>
<td>86.20%</td>
<td>67</td>
<td>84.80%</td>
</tr>
<tr>
<td>Resolution Code</td>
<td>265</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolved</td>
<td>39</td>
<td>14.70%</td>
<td>10</td>
<td>17.20%</td>
<td>5</td>
<td>6.30%</td>
</tr>
<tr>
<td>Not Resolved</td>
<td>226</td>
<td>85.30%</td>
<td>48</td>
<td>82.80%</td>
<td>74</td>
<td>93.70%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>$M$ (SD)</th>
<th>$M$ (SD)</th>
<th>$M$ (SD)</th>
<th>$M$ (SD)</th>
<th>$M$ (SD)</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Count</td>
<td>$n = 265$</td>
<td>315.68</td>
<td>107.63</td>
<td>315.41</td>
<td>112.33</td>
<td>323.41</td>
</tr>
<tr>
<td>Self-Blame</td>
<td>$n = 260$</td>
<td>4.61</td>
<td>1.93</td>
<td>3.98</td>
<td>2.03</td>
<td>4.78</td>
</tr>
</tbody>
</table>

*Note: **p < .001, * p < .05*
<table>
<thead>
<tr>
<th>Event</th>
<th>Secure</th>
<th>Preoccupied</th>
<th>Dismissive</th>
<th>Fearful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical appearance and/or eating bx critiqued</td>
<td>14.00%</td>
<td>25.90%</td>
<td>10.00%</td>
<td>11.50%</td>
</tr>
<tr>
<td>Trauma</td>
<td>12.10%</td>
<td>12.10%</td>
<td>15.00%</td>
<td>9.60%</td>
</tr>
<tr>
<td>Being cheated on</td>
<td>5.70%</td>
<td>3.40%</td>
<td>10.00%</td>
<td>3.80%</td>
</tr>
<tr>
<td>Partner ends romantic relationship</td>
<td>4.90%</td>
<td>5.20%</td>
<td>7.60%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Failure to reciprocate romantic feelings</td>
<td>4.20%</td>
<td>1.70%</td>
<td>5%</td>
<td>3.80%</td>
</tr>
<tr>
<td>Sex</td>
<td>3.80%</td>
<td>6.90%</td>
<td>0%</td>
<td>5.80%</td>
</tr>
<tr>
<td>Verbal or relational bullying</td>
<td>4.20%</td>
<td>3.40%</td>
<td>3.80%</td>
<td>5.80%</td>
</tr>
<tr>
<td>Emotionally hurting another person</td>
<td>2.60%</td>
<td>1.70%</td>
<td>2.50%</td>
<td>0%</td>
</tr>
<tr>
<td>Rejected in social context</td>
<td>2.30%</td>
<td>1.70%</td>
<td>3.80%</td>
<td>1.90%</td>
</tr>
<tr>
<td>Social comparison</td>
<td>5.30%</td>
<td>1.70%</td>
<td>8.90%</td>
<td>7.70%</td>
</tr>
<tr>
<td>Difficulty communicating</td>
<td>4.50%</td>
<td>1.70%</td>
<td>2.50%</td>
<td>5.80%</td>
</tr>
<tr>
<td>Expressiveness</td>
<td>1.90%</td>
<td>1.70%</td>
<td>2.50%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Experience contempt from family</td>
<td>3.80%</td>
<td>3.40%</td>
<td>3.80%</td>
<td>3.80%</td>
</tr>
<tr>
<td>Fail to meet others' expectations</td>
<td>5.70%</td>
<td>5.20%</td>
<td>5%</td>
<td>9.60%</td>
</tr>
<tr>
<td>Academic performance</td>
<td>6.80%</td>
<td>3.40%</td>
<td>6.30%</td>
<td>9.60%</td>
</tr>
<tr>
<td>Athletic or music performance</td>
<td>4.90%</td>
<td>6.90%</td>
<td>2.50%</td>
<td>5.80%</td>
</tr>
<tr>
<td>Work performance</td>
<td>2.30%</td>
<td>3.40%</td>
<td>1.30%</td>
<td>1.90%</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---</td>
<td>-----</td>
<td>---</td>
<td>-----</td>
</tr>
<tr>
<td>Mental or physical health problems</td>
<td>6</td>
<td>2.30%</td>
<td>1</td>
<td>1.70%</td>
</tr>
<tr>
<td>Gender and sexual orientation</td>
<td>6</td>
<td>2.30%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>4</td>
<td>1.50%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Parents’ separate and/or divorce</td>
<td>4</td>
<td>1.50%</td>
<td>1</td>
<td>1.70%</td>
</tr>
<tr>
<td>Inequality in relationship</td>
<td>4</td>
<td>1.50%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Self-perceived irresponsible choice</td>
<td>4</td>
<td>1.50%</td>
<td>3</td>
<td>5.20%</td>
</tr>
<tr>
<td>Quitting a valued activity because of your relationship</td>
<td>1</td>
<td>0.40%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Concerned how friends perceive your romantic relationship</td>
<td>1</td>
<td>0.40%</td>
<td>1</td>
<td>1.70%</td>
</tr>
</tbody>
</table>
Table 15
*Descriptives for ES task RTs Pre- and Post-MIP among PBI Quadrants*

<table>
<thead>
<tr>
<th>Parent-Child Bond (N = 234)</th>
<th>ES Shame Response Times</th>
<th>ES Threat Response Times</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-MIP</td>
<td>M</td>
</tr>
<tr>
<td>Optimal Parenting</td>
<td>18.34</td>
<td>(194.73)</td>
</tr>
<tr>
<td>Affectionate Constraint</td>
<td>7.14</td>
<td>(227.22)</td>
</tr>
<tr>
<td>Affectionless Control</td>
<td>43.09</td>
<td>(254.75)</td>
</tr>
<tr>
<td>Neglectful Parenting</td>
<td>13.82</td>
<td>(210.53)</td>
</tr>
<tr>
<td>Total</td>
<td>18.97</td>
<td>(220.30)</td>
</tr>
</tbody>
</table>

*Note:* The unit of measurement was milliseconds.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SSGS</td>
<td></td>
<td>ESS</td>
</tr>
<tr>
<td></td>
<td>Pre-MIP</td>
<td>Post-MIP</td>
<td>Pre-MIP</td>
</tr>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Optimal Parenting</td>
<td>7.03 (2.41)</td>
<td>a 8.35 (4.28)</td>
<td>2.90 (.98)</td>
</tr>
<tr>
<td>Affectionate Constraint</td>
<td>7.18 (2.92)</td>
<td>a 8.78 (4.49)</td>
<td>3.02 (.96)</td>
</tr>
<tr>
<td>Affectionless Control</td>
<td>8.36 (3.61)</td>
<td>a 10.83 (5.29)</td>
<td>3.36 (1.07)</td>
</tr>
<tr>
<td>Neglectful Parenting</td>
<td>8.85 (3.68)</td>
<td>a 10.13 (4.87)</td>
<td>3.20 (.79)</td>
</tr>
<tr>
<td>Total</td>
<td>7.55 (3.07)</td>
<td>a 9.20 (4.71)</td>
<td>3.07 (.98)</td>
</tr>
</tbody>
</table>

*Note:* Means with different subscripts differ significantly at p < .05 or greater. ‘a’ is equivalent to a significant difference across time within attachment style from pre- to post-MIP. For example, SSGS scores for individuals’ in the affectionate constraint group significantly increased from baseline to after the MIP.
Table 17

*Descriptives for Trait Shame Pre- and Post-MIP among the PBI Quadrants*

<table>
<thead>
<tr>
<th>Parent-Child Bond</th>
<th>Pre-MIP</th>
<th>Post-MIP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>(SD)</td>
</tr>
<tr>
<td>Optimal Parenting</td>
<td>29.55</td>
<td>(19.18)</td>
</tr>
<tr>
<td>Affectionate Constraint</td>
<td>30.27</td>
<td>(18.52)</td>
</tr>
<tr>
<td>Affectionless Control</td>
<td>39.54</td>
<td>(16.50)</td>
</tr>
<tr>
<td>Neglectful Parenting</td>
<td>36.12</td>
<td>(19.90)</td>
</tr>
<tr>
<td>Total</td>
<td>32.56</td>
<td>(18.82)</td>
</tr>
</tbody>
</table>
Table 18  
*Repeated Measures ANOVA for Trait Shame by PBI category (N = 234)*

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>317.35</td>
<td>1</td>
<td>317.35</td>
<td>7.98</td>
<td>.005</td>
<td>.033</td>
</tr>
<tr>
<td>Time x PBI</td>
<td>389.85</td>
<td>3</td>
<td>129.95</td>
<td>3.26</td>
<td>.022</td>
<td>.041</td>
</tr>
<tr>
<td>Error</td>
<td>9161.40</td>
<td>230</td>
<td>39.83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Purple Order

<table>
<thead>
<tr>
<th>Mood Induction Procedure</th>
<th>Baseline Block 1</th>
<th>Baseline Block 2</th>
<th>Baseline Block 3</th>
<th>Baseline Block 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutral</td>
<td>Threat</td>
<td>Neutral</td>
<td>Shame</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mood Induction Procedure</th>
<th>Post-MIP Block 5</th>
<th>Post-MIP Block 6</th>
<th>Post-MIP Block 7</th>
<th>Post-MIP Block 8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutral</td>
<td>Threat</td>
<td>Neutral</td>
<td>Shame</td>
</tr>
</tbody>
</table>

### Yellow Order

<table>
<thead>
<tr>
<th>Mood Induction Procedure</th>
<th>Baseline Block 1</th>
<th>Baseline Block 2</th>
<th>Baseline Block 3</th>
<th>Baseline Block 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutral</td>
<td>Shame</td>
<td>Neutral</td>
<td>Threat</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mood Induction Procedure</th>
<th>Post-MIP Block 5</th>
<th>Post-MIP Block 6</th>
<th>Post-MIP Block 7</th>
<th>Post-MIP Block 8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutral</td>
<td>Shame</td>
<td>Neutral</td>
<td>Threat</td>
</tr>
</tbody>
</table>

*Note: Each block of words is composed of 10 different words.*

*Figure 1.* Block randomization of the Emotional Stroop Task – Word type composition for each block.
Figure 2: Change in SSGS scores from baseline to post-MIP by attachment style.
Figure 3: Change in ESS scores from baseline to post-MIP by attachment style.
Figure 4: Change in implicit shame by attachment style (N = 265).
Figure 5: Change in implicit shame by attachment style with resolved responses removed ($N = 226$)
Appendix A

Informed Consent
University of North Texas Institutional Review Board
Informed Consent

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study, and how it will be conducted.

Title of Study: Personality and Emotion

Student Investigator: Sarah A. Hammon, M.S. Supervising Investigator: Patricia L. Kaminski, Ph.D. Affiliation: Department of Psychology, University of North Texas (UNT).

Purpose of the Study: The main purpose of this study is to improve our understanding of differences in how individuals cope with and express particular emotions. Participation will involve providing some demographic information and completing questionnaires on mental health information, personality, and emotions as well as a computerized task and brief writing task. Some of the details of the study will be withheld until completion of the study.

Study Procedures: Participation involves completing questionnaires, a computerized task, and writing task privately, although a researcher will be in the next room if you have questions or concerns. The questionnaires will ask about demographics (e.g., age, class year, and marital status), personality, mental health, and emotion. The writing task will involve you writing about a past event and answering questions about the event. Participation will take approximately 90 to 150 minutes and debriefing will follow the conclusion of the study.

Foreseeable Risks: The potential risks involved in this study are minimal. We expect that some participants may feel uncomfortable or experience mild distress when completing questionnaires and the writing task. If you would prefer not to answer a certain question, you can simply choose to skip it. Alternatively, should you wish to stop your participation, you may do so. Furthermore, a list of counseling resources will be given to you upon completion of the study in case you wish to speak with a mental health professional about any concerns, even if you chose to withdraw from the study. Finally, you will be debriefed about the full purpose of the study at the end of study.

Benefits to the Subjects or Others: The findings of this study may benefit the field of psychology by contributing to our understanding of individual differences in how one expresses and copes with emotions. This information may benefit mental health professionals because of the relationship between emotion and many mental health concerns (e.g., depression, anxiety). In addition, the writing task may offer participants the opportunity to gain new insight and understanding about an emotionally challenging event in their past.

Compensation for Participants: You will receive $15 and 1 Sona research credit per half hour of participation (5 credits total) as compensation for your time.

Procedures for Maintaining Confidentiality of Research Records: All of your information will be kept confidential (private) unless you are in immediate danger of harming yourself or others, inform us of a child, elderly, or disabled person being abused or neglected or reveal sexual exploitation by a mental health provider. Every survey packet will have a unique number associated with it. Consent forms and participants’ survey responses will be kept in separate locked file cabinets in a locked room in Terrill Hall (#327). Only study personnel will have access to data locked in...
the file cabinets. The confidentiality of each participant's individual information will be maintained in any publications or presentations regarding this study. Per federal regulations, your de-identified data and signed consent forms will be stored separately and kept in a locked file cabinet in a locked room for 3 years after the conclusion of this study.

**Questions about the Study:** If you have any questions about the study, you may contact Sarah Hammon, M.S. at 612-618-1358 or Patricia L. Kaminski, Ph.D. at 940-565-2671.

**Review for the Protection of Participant:** This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

**Research Participants' Rights:** Your participation in the survey confirms that you have read all of the above and that you agree to all of the following:

- A researcher has explained the study to you and you have had an opportunity to contact him/her with any questions about the study. You have been informed of the possible benefits and the potential risks of the study.
- You understand that you do not have to take part in this study and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- Your decision whether to participate or to withdraw from the study will have no effect on your grade or standing in any UNT course.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.

Printed Name of Participant

__________________________  ____________________________
Signature of Participant    Date

**For the Student Investigator or Designee:**
I certify that I’ve reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

__________________________  ____________________________
Signature of Student Investigator or Designee    Date
Appendix B

Rating Scale
## Rating Scale

Please rate how **evocative** you think the writing task was using the 7-point scale below.

<table>
<thead>
<tr>
<th>Not at All</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Extremely</th>
</tr>
</thead>
</table>

Please rate the degree to which you were able to **visualize** yourself in the memory using the 7-point scale below.

<table>
<thead>
<tr>
<th>Not at All</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Extremely</th>
</tr>
</thead>
</table>

Please rate the degree to which you feel each of the following emotions RIGHT NOW using the 7-point scale.

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Not at All</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sadness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shame</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hostility</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Demographics Questionnaire
Demographic Questionnaire

1. Ethnicity:
   (1) ☐ Asian American                            (4) ☐ Latin American (Hispanic)
   (2) ☐ African American (Black)                  (5) ☐ Native American (Indian)
   (3) ☐ European American (Caucasian)             (6) ☐ Other

2. Age: _______ years old

3. Sex:
   (1) ☐ Female
   (2) ☐ Male
   (3) ☐ Transgender

4. Sexual Orientation: (Check all that apply)
   (1) ☐ Straight/Heterosexual                      (3) ☐ Bisexual
   (2) ☐ Gay/Lesbian                                (4) ☐ Questioning/Unsure

5. Which category best describes your marital status?
   (1) ☐ Married (Legally)                          (4) ☐ Widowed
   (2) ☐ Not married, but living together           (5) ☐ Separated
   (3) ☐ Divorced                                  (6) ☐ Single, not living with a partner
   (7) ☐ Other (please explain ________________________)

6. Which category best describes your current relationship status?
   (1) ☐ Single, not dating                         (4) ☐ Living together/engaged
   (2) ☐ Single, dating casually                    (5) ☐ Married / partnered
   (3) ☐ Single, but dating seriously               (6) ☐ Separated
   (7) ☐ Other (please explain ________________________)

7. If you are currently in a romantic relationship, how long have you been with your romantic partner? _______ months

8. How many significant romantic relationships have you had? _______

9. Please indicate your household’s total income before taxes for the past year, including salaries, wages, social security, welfare, and any other income: $_________

10. How many people live in your household including yourself? _______
11. Have you ever attended therapy (individual, group, couples) as an adult (18 years of age or older)?
(1) ☐ Yes
(2) ☐ No

12. If you are attending therapy CURRENTLY, how long have you attended therapy?
(1) ☐ 3 months or less
(2) ☐ 3-9 months
(3) ☐ About 1 year
(4) ☐ 2 years
(5) ☐ 3+ years
(6) ☐ I am not attending therapy currently.

13. If you are attending therapy CURRENTLY, what is the reason?
________________________________________________________________________
☐ I am not attending therapy currently.

14. If you attended therapy in the PAST, how long did you attend therapy?
(1) ☐ 3 months or less
(2) ☐ 3-9 months
(3) ☐ About 1 year
(4) ☐ 2 years
(5) ☐ 3+ years
(6) ☐ I did not attend therapy in the past.

15. If you attended therapy in the past, how old were you?
_________ years
☐ I did not attend therapy in the past.

16. If you attended therapy in the past, what was the reason?
________________________________________________________________________
☐ I did not attend therapy in the past.

17. Class Rank:
(1) ☐ Freshman
(2) ☐ Sophomore
(3) ☐ Junior
(4) ☐ Senior

18. GPA: ________________
Appendix D

Expressive Writing Task
Writing Task Part 1

For your next task, think back to times in your life when you felt self-conscious and some combination of…

- Rejected because of your flaw(s)
- An intense desire to hide your weaknesses from people
- Inferior and not “good enough”

Some common experiences when people have these thoughts/emotions are listed below. Many of your experiences may not be captured in these examples and that is okay. The list is not exhaustive, but instead, is provided as a guide to help you begin to remember your own experiences.

Examples of common experiences when people had the above mentioned emotions/thoughts include:

- Hurting someone emotionally who is important to you.
- Becoming seriously injured or sick and needing to depend on someone else for care.
- Being disciplined or demeaned by a parent, or parent favoring a sibling.
- Failing at a task, project, or job you were very invested in or expected to do well.
- Issues about sex, such as how one’s body looks or sexual performance.
- Addictions (e.g., substances, pornography).
- Experiencing physical, sexual, emotional, or verbal abuse.

Please take 5 minutes and list as many experiences as you can recall in which you felt self-conscious and some combination of the negative thoughts/emotions listed above in the last 5 years. As in the examples below, use only a sentence or two to label each experience. Please write legibly. All responses will be kept completely confidential (private).

Example #1: When I told my parents that I was on academic probation and they were so disappointed in me.
Example #2: When my romantic partner said I should skip dessert because I had gained some weight.

1.
2.
3.
4.
5.
6.
7.
Describe your clearest and most important memory of an experience in which you felt self-conscious and some combination of inferior, not “good enough”, rejected because of your flaw(s), and/or an intense desire to hide your weaknesses from people. Choose a memory that still bothers you and is relatively recent (e.g., past 5 years). As you write, really try to visualize yourself in this memory and let yourself get in touch with the emotion.

Describe a specific, one-time incident in the form of, “I remember one time…” Be sure to include how the memory begins and how it ends, and wherever possible describe how you were feeling in each moment.
Please write neatly and provide as much detail as possible.
Please answer the following questions about the memory.

1. What is the clearest part of the memory?

2. What is the strongest feeling in the memory? What thought or action is this connected with?

3. If you could change the memory in any way, what would it be?

4. Why is this memory so important/impactful to you?

5. How much do you blame yourself for the event?

<table>
<thead>
<tr>
<th>Not at All</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Extremely</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

6. Please list the main people involved in the event (e.g., parent, romantic partner, professor, sibling)?

____________________    ____________________
____________________    ____________________
____________________    ____________________
____________________    ____________________

7. Your approximate age at the time of the memory? ________ years
Appendix E

Written Response Qualitative Codes
The written responses from the shame MIP were coded along five dimensions: shame or not, shame, interpersonal or intrapersonal, social agent, performance, and resolution. Below is a description of each code, inter-rater reliability data for each code, and the original code definition sheets.

*Shame* was coded dichotomously (present or absent) to identify written responses that were about an important and impactful event, but based on the participant’s written description, did not involve the feeling of shame. Kappa coefficient for the shame code ranged from .89 to 1.00 for the coding teams. The responses that did not involve feelings of shame were the death of an immediate family member (e.g., sibling, parent) or a sibling suffering from mental illness threatening to harm themselves or others. Because the objective of the study was to induce feelings of shame during the MIP, these written responses were not coded along the other dimensions.

*Nature of event* was coded dichotomously (interpersonal or intrapersonal) to identify written response that involved an interpersonal component. Interpersonal events were defined as the participant describing a social interaction that caused feelings of shame, wanting to maintain or establish connection, expressing fear of losing connection, and/or concern with being judged by others or how they affected others. If none of the interpersonal descriptors applied, an event was coded as intrapersonal (e.g., the participant was focused solely on self-judgment). Interrater reliability for nature of event was very good (Kappa coefficient ranged from .96 to .97).

*Social agent* was coded subsequent to the nature of event. Social agent identified the primary person involved in the shameful event. Seven social agents were coded: (ex-) romantic partner, romantic interest, friends, peers, family, adult instructor or coach, and non-parental adult (i.e., adults identified in the written response that were not family members, instructors, or coaches). Kappa ranged from .91 to .93, suggesting very good interrater reliability. Written responses that were assigned an intrapersonal code were excluded from the interrater reliability calculation.
Performance was coded dichotomously (present or absent). The performance definition provided by Tangney (1992) was utilized in the current study. Performance was coded as ‘present’ in the written response if the participant felt their performance, abilities, and/or skills were negatively evaluated during the event. Kappa coefficient for the performance code ranged from .95 to .98 for the coding teams.

Resolution was coded dichotomously to identify participant’s who did not follow the part of the writing task instruction that asked the participant to write about an event that still bothers them. The No Resolution code was assigned to events that the participant described as still upsetting, affecting them negatively, and/or continuing to experience negative feelings toward others involved in the event (e.g., “I was upset with myself. I still am.”). The Resolved code was assigned to events that did not seem to currently bother the participant. More specifically, the participant felt like things were settled and accepted the event, circumstances, and/or effects of the event (e.g., I soon got over it and moved on with my life knowing there wasn’t much I could do”). Additionally, the participant may have indicated that they would not change anything about the event because of growth or new realizations (e.g., “I wouldn’t change anything because in defeat there is learning about [your] flaws and improving from them.”). Kappa Measure of Agreement ranged from .72 to .96 suggesting moderate to very good interrater reliability.

Shame triggering event was coded using 25 mutually exclusive categories. The 25 categories were developed based on an iterative induction procedure. Initially, a set of event codes was developed from a subset of written responses. Subsequent groupings of the written responses were analyzed and the event codes were revised accordingly. One hundred percent of the written responses were assigned a single event code. Kappa coefficient for the event code ranged from .85 to .87 indicating good interrater reliability.
Definitions

Interpersonal Event = 1
- Interpersonal if 1 of the following criteria is met…
  o An interaction causes feelings of shame
  o Wanting to maintain or establish connection
  o Fear of losing connection
  o Concern with being judged by others
  o Concern with how you affect others
*If none of these descriptors apply then considered an “intrapersonal event”

Intrapersonal Event = 2
- Event occurring within the individual mind or self
- Focused solely on self-judgment/criticism/etc. No expressed concern about judgment by others

Social Agent

1) Romantic Partner, Ex-Romantic Partner
   Someone who you are/were in a consensual romantic relationship with
   Examples: Boyfriend/girlfriend, partner, husband/wife

2) Romantic Interest
   Someone who you had/have romantic feelings for, but these feelings did not develop into a mutual
   romantic relationship
   Examples: Crush, “first love”, “person I love”, or “person I fell in love with” (but not reciprocated);
   “guy or girl very interested in”; romantically involved with person who has another romantic partner;
   sexual partner that is not identified as romantic partner

3) Friends
   Identified as “friend” in the response

4) Peers
   Individuals who are of the same age, or status as the participant but are not identified as “friends” by
   the participant in text
   Examples: Classmates, fraternity, band members, teammates or other athletes, organization members
   (e.g., club, religion), people they spend time with but do not identify as friends; strangers at a party;
   co-workers

5) Family
   Identified person involved in the event as a family member
   Examples: Parents, siblings, grandparents, aunts, uncles, cousins, stepparents

6) Adult Instructor or Coach
   Adult in a leadership or educational role
   Examples: Band instructor, teacher/instructor/professor, coach

7) Non-Parental Adult
   Define: Adults identified in the event that are not family members or instructors
   Examples: Family friend, customer, professional, military officer, athletic judges, therapist,
   academic advisor

8) No Social Agent
   Intrapersonal event

Performance (1 = performance, 2 = no performance)
- Events that involved a clear performance component – that is, where the quality of one’s
  performance, skills, and/or abilities was at issue (Tangney, 1992)
Level of Resolution

Basically, did the participant follow the instruction and write about something that currently bothers them.

Does the participant appear to be still bothered by the event?

Yes: Participant is still bothered = 0
Described event as still upsetting and/or affecting them; still experience negative feelings toward others involved.

<table>
<thead>
<tr>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I was upset with myself. I still am.”</td>
</tr>
<tr>
<td>“My stuttering is still a problem today but I’m learning how to deal with it.”</td>
</tr>
<tr>
<td>“It still affects me today and I am still recovering/relearning.”</td>
</tr>
<tr>
<td>“… and I still think about it every time I look at pictures that I’m in.”</td>
</tr>
</tbody>
</table>

No: Participant is not currently bothered by event = 2
The person feels like things are settled and accepts the event, circumstances, or the effects of the event. May indicate that they would not change anything about the event because of growth or new realizations.

<table>
<thead>
<tr>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I soon got over it and moved on with my life knowing there wasn’t much I could do.”</td>
</tr>
<tr>
<td>“I would change nothing. It was the way life went and in defeat there is success and learning about [your] flaws and improving from them.”</td>
</tr>
<tr>
<td>“All of this is what drove me to start working out and getting bigger. Now instead of the first thing people talking about is how skinny I am, they talk about how big I’ve gotten. I wouldn’t change anything because it drove me to have the body that I have today and I’m proud of the progress I made” (253)</td>
</tr>
</tbody>
</table>

Shame Definition

Code as shame…
Uses the word shame or ashamed in written response OR

At some point the event caused the person to feel self-conscious and some combination of…

Self-conscious Examples:
- “started to become aware of what others thought of me”
- “fearful of being judged”
- Feeling “not good enough,” inferior, inadequate, small, powerless, defective, insignificant and/or like a failure
- Rejection because perceived “flaws”
- A desire to hide vulnerability from others (e.g., perceived weaknesses, emotion, romantic feelings)
- A desire to escape a situation
- Feeling exposed in front of real or imagined audience
- Feeling not deserving of love and belonging
  - Example: “I can’t believe my dad still loves me”
- Failing to meet one’s personal standard which leads to negative evaluation by the self or others
<table>
<thead>
<tr>
<th>Event</th>
<th>Definition and (Best) Examples</th>
<th>Examples</th>
</tr>
</thead>
</table>
| 1. Partner ends romantic relationship | Partner terminates romantic relationship; coping with break up in unhealthy ways (e.g., self-harm, pills); you initiate the break up and when you want to get back together ex-partner rejects offer; ex-partner dates/marries someone else | * “I felt like I was not good enough for him so he [married] someone else.”  
* “… after the break up I had the feeling that just a little bit of stress makes me flawed and unlovable.” |
| 2. Being cheated on | Romantic partner physically/emotionally cheats on you; romantic partner maintaining romantic feelings for someone else (explicitly states partner had long-term feelings for someone else)  
Note for Social Agent: occurs between 2 attachment figures (e.g., partner and best friend) go with person focus on in written response. If described an equal amount, default to romantic partner | * “I am not good enough for them to be faithful”  
* “I felt ashamed and foolish to never expect to get hurt or betrayed by the two people I trusted most.” |
| 3. Emotionally hurting another person | Emotionally hurting another person; saying cruel or hurtful things; breaking up with partner; gang up with one parent against the other parent; physically/emotionally cheat on a romantic partner; flirting through text message with someone other than your partner | * “I cheated on my boyfriend… I don’t think I’ll ever forget the way he looked at me. I saw pain written all of over his face and it was my fault, my stupidity, my carelessness.”  
* “To see the pain I caused… and accepting I have that inside of me makes me self-conscious & anxiety ridden” |
| 4. Sex | Voluntary sexual behaviors (or lack of); lack of sexual desire; sexually inexperienced; virginity; texting naked pictures or sexual statements; sexual promiscuity; addiction to pornography; emotionally manipulated to have sex; casual sex after break up; lose virginity to person and they end contact; feeling rejected sexually by partner; parents catch you “sexting” or having sex | * “I had no idea what I was doing. He stopped me in the middle and told me that I wasn’t doing it right and that I was not good at it… I wanted to disappear. I felt like a horrible girlfriend and very unsexy.”  
* “… my mother opened the door to see [my girlfriend and I] half-naked on my bed. I instantly felt shame more intense than I ever had before.” |
| 5. Trauma | Experiencing verbal, emotional or physical abuse; neglect; or sexual abuse/assault/harassment  
Verbal abuse  
name-calling, cursing at person  
Emotional abuse  
family: chronic criticism and/or belittling may result in never feeling “good enough”  
romantic relationship: threatening physical harm, threatening self-harm if end romantic relationship, unfounded accusations of infidelity, stalking, chronic criticism  
Physical abuse  
damaging personal property, hitting  
Sexual abuse/assault  
coercing or attempting to coerce any sexual contact without consent (e.g., rape, disclosing to other about sexual abuse, blamed for the abuse, seeing abuser at family functions). | * “[My boyfriend] would scream at me and call me a ‘whore, crazy, and stupid’… I started to feel inadequate, incapable, disgraceful, and slightly insane.”  
* “I was not allowed to express negative emotions or ask for comfort when I was upset. [My mother] never wanted me to touch her… I had to be perfect all while being told I was not and that I was a disappointment to her.”  
* “I kept worrying that my family knew [my uncle raped me]. I felt dirty and that they were ashamed of me.” |
<table>
<thead>
<tr>
<th>Sexual harassment</th>
<th>unwelcome requests for sexual favors or sexual advances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver neglect</td>
<td>chronic withholding of approval or affection, never saying “I love you”</td>
</tr>
<tr>
<td>6. Physical appearance and/or eating behavior critiqued</td>
<td>Physical appearance (e.g., weight, breast size, hair, clothing, skin, size of legs or arms) and/or eating behavior criticized by others or the self; teased or degraded about flaws real or perceived in one’s physical appearance; commenting on weight (e.g., too heavy or thin); body objectified; others’ unacceptable of changing physical appearance (e.g., tattoos); critical of physical deformity (e.g., hump on back) caused by an illness; self-conscious about aspects of physical appearance</td>
</tr>
<tr>
<td>Note: If bullied, but only about physical appearance code as “physical appearance” (not verbal or relational bullying)</td>
<td></td>
</tr>
<tr>
<td>Note: If social comparison is only about physical appearance, then code as physical appearance.</td>
<td></td>
</tr>
<tr>
<td>Note: If romantic interest rejects person because of an aspect of their body, code as physical appearance.</td>
<td></td>
</tr>
<tr>
<td>7. Failure to reciprocate romantic feelings</td>
<td>Express romantic interest in a person and the person does not reciprocate the feelings; romantic interest ends contact with you; person chooses to date or spend time with someone else; romantic interest dates your friend;</td>
</tr>
<tr>
<td>Note: If response is about inviting someone to a dance but no romantic feelings are described code as “social rejection”</td>
<td></td>
</tr>
<tr>
<td>Note: If assign this code, social agent must be coded “romantic interest”</td>
<td></td>
</tr>
<tr>
<td>8. Verbal or relational bullying (by friends/peers)</td>
<td>Teased, criticized, undermined, and/or degraded; gossiped about; friends/peers make racist comments; intentionally embarrassed by friends/peer(s) in public; fearful will be teased or criticized about an aspect of the self; socially excluded/rejected (e.g., not picked for a team)</td>
</tr>
<tr>
<td>Note: Code as bullying if make comments about physical appearance and any other kind of bullying mentioned</td>
<td></td>
</tr>
<tr>
<td>9. Rejected in social context (NOT including bullying or abuse,</td>
<td>Rejected in a social context or you do not feel accepted; friendship ends; person rejects your invitation; date won’t dance with you; best friend and ex-romantic partner become close; feeling excluded from family</td>
</tr>
<tr>
<td>Note: If bullied, but only about physical appearance code as “physical appearance” (not verbal or relational bullying)</td>
<td></td>
</tr>
<tr>
<td>Note: If social comparison is only about physical appearance, then code as physical appearance.</td>
<td></td>
</tr>
<tr>
<td>Note: If romantic interest rejects person because of an aspect of their body, code as physical appearance.</td>
<td></td>
</tr>
<tr>
<td>* “I focused initially on getting to class until two extremely skinny girls walked directly in front of me… they have no idea that looking at them makes me feel like garbage.”</td>
<td></td>
</tr>
<tr>
<td>* “I started partying and gained 20 lbs. When I realized how awful I looked, I started purging after each meal. I was extremely depressed and felt like a disgusting failure.”</td>
<td></td>
</tr>
<tr>
<td>* “Because my worst fear was telling someone I liked them and them telling everyone and that is exactly what happened and much worse…”</td>
<td></td>
</tr>
<tr>
<td>* “They even got other students in the grade to whisper about me. Eventually I felt so bad about myself that I wanted to crawl into a hole.”</td>
<td></td>
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<td>* “I could hear [my classmates] making racist comments. Not only did I feel self-conscious about my skin color, but I also I felt like wasn’t good enough.”</td>
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<td>* I asked a guy to dance and he said, ‘he was looking for someone.’ I felt very self-conscious at this point. I felt very rejected like I wasn’t good enough.”</td>
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<td>1. Break up, or unreciprocated romantic feelings</td>
<td>Note: Do NOT code as “social rejection” if rejection happens in context of bullying, abuse, break up, or unreciprocated romantic feelings</td>
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<td>10. Social comparison</td>
<td>You or others compare you to others; you engage in social comparison with friends, peers, romantic partner’s ex, siblings or other family members about real or perceived discrepancies (e.g., finances, success, desirability as a romantic partner, level of support); jealousy in friendship about friend’s romantic relationship; favoritism; feeling rejected by a parent that accepts your sibling Note: If social comparison is ONLY about physical appearance, then coded under body image</td>
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<td>11. Difficulty communicating</td>
<td>Difficulty socializing, communicating, or presenting in class; experiencing social anxiety; stuttering; difficulty communicating in 2nd language</td>
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<td>12. Experience contempt from family</td>
<td>Considered unworthy of family member’s respect or concern (e.g., major violation of privacy); family member points out your “flaws”; criticized instead of congratulated and/or supported; seek support and family member responds with criticism</td>
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<td>13. Fail to meet others’ expectations</td>
<td>Failing to meet others expectations for your academic, athletic or musical performance; Failing to act responsibly according to others’ expectations for dating, drinking, finances, driving or parenting; parent informing you that they are disappointed in you because of your choices; partner does not see you as fit to be a parent</td>
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<td>14. Academic performance (NOT related to others’ expectations)</td>
<td>Perceived poor academic performance; performing “poorly” in a particular subject or on homework or a test; academic probation/suspension; not receiving a scholarship or admission to a college; encouraged to change major; accused of cheating because of the strength of your performance; lack of motivation to pursue goals or perform coursework</td>
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| 15. Athletic or music performance (NOT related to others’ expectations) | Perceived poor sport or music performance; encouraged to quit a sport; explicitly told will never succeed in a sport due to lack of skill, technique, or physical size; feeling inferior or criticized about athletic performance; cut from team or moved to lower team; quitting a music audition; failing to get leadership position in band or team | “I wasn’t as athletic as the other guys, so I looked really bad compared to everyone else. It made me feel pretty inferior, and like I didn’t belong.”  
“That was the day I will never forget because they cut me… At that moment I thought I wasn’t good enough and wasn’t worth anything.” |
|---|---|---|
| 16. Work performance | Perceived poor work performance; criticized by customer or boss; not feeling worthy of praise or recognition one receives from others about work performance; publicly chastised, berated, and/or criticized in the army | “Made me feel self-conscious not only about my abilities as a server, but my appearance and my intelligence level.”  
“I personally did not feel worthy of the praise or position I had attained.” |
| 17. Experiencing mental or physical health problem | You or a family member suffers from mental illness or chronic physical illness; disclosing about struggle with physical/mental illness and/or taking psychiatric medication  
Note: shame comes from problems/medication not from fall out from interactions with other people | “[My father] asked me why I was on anti-anxiety medication … and he sarcastically said ‘so you’re pretty much unfixable then, huh?’”  
“Feeling like a defective teenager who was all alone in a battle with my body.” |
| 18. Expressiveness | Criticized for expressiveness (or lack of); lack of emotional expression; talking “too much”; express feelings and struggles to others and worry that others will judge you; becoming upset and/or tearful in public; fail to share romantic feelings because of not feeling good enough/fear of rejection | “When my partner said, ‘I am not sure how I can love someone as dead and heartless as you”… I felt ashamed.”  
“I felt relieved that I was getting it off my chest… my friends just laughed and said “that’s stupid.”” |
| 19. Gender and sexual orientation | Criticized or not accepted because of your sexual orientation or gender identity; coming out; cross dressing; feeling as though you do not “pass” as a trans-person; criticized for not meeting gender expectations; teased for not being masculine or feminine “enough” | “I realized I would never be good enough for my parents unless I gave up [cross dressing], one of the few meaningful things in my life.”  
“When my girlfriend’s mom was critical of me for being transgender.” |
| 20. Substance abuse | Substance abuse; relapse; disclosing about substance abuse; family member abusing substances | “I took my pain into my own hands and abused my pain medicine and relapsed on IV heroine… I finally got the courage to tell my fiancé and he told me that I got myself into this situation so I had to get myself out.”  
“I then proceeded to stand in front of the door begging [my dad] not to go the liquor store… He pushed me out of the way while telling me he didn’t care what happened to me and he did not need me around.” |
| 21. Inequality in relationship | Relationship feels unequal (e.g., you invest or care more); friend(s) forget your birthday; person is only friends with you out of pity; caring for person physically/emotionally and person is unappreciative; | “I didn’t say anything about my birthday to see if my friends care enough to remember … As I expected they didn’t. I felt like I was nothing to the people I was there for and it made me angry and empty.”  
“Feeling unappreciated and that nothing I did was good enough for him.” |
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<td><strong>22. Parents’ separate and/or divorce</strong></td>
<td>Parents’ divorce; parent remarries; parent’s new family gets “dad” you wanted; feel abandoned by parent</td>
<td>* “I looked up to my father and visualized myself becoming him as I grew up, but [after he left] I felt disgusted and ashamed to call him father. I felt somewhat responsible.”</td>
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| **23. Self-perceived “irresponsible” choice or action(s)** | Blaming self for a mistake; failing to visit loved one in hospital before they died  
Note: Code if no one else is identified in thinking choice or action was irresponsible | * “Everything was taken away by my stupidity of carrying those documents.” |
| **24. Quitting a valued activity because of romantic relationship** | Quitting a valued activity to spend more time with your romantic partner | * “Eventually, I dropped out of the XXX Orchestra that I worked so hard to become a part of.” |
| **25. Concerned how friends perceive romantic relationship** | Concerned how others view your romantic relationship; worried friends think you are in an abusive relationship | * “My friend that said that she and her boyfriend agreed on the way home from the party that how my husband treated me bothered them.” |
Appendix F

The Relationship between Parental Bond in Childhood and Shame in Adulthood
Parenting Styles in Childhood and Shame

A secondary set of hypotheses regarding the relationship between participants’ perceptions of parental responsiveness during childhood and shame in adulthood was explored in the current study. Participants retrospectively reported on the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) their caregiver’s level of care and overprotection. Based on their scores, participants were grouped into one of the four parent-child bond categories: optimal parenting (high care, low overprotection), affectionate constraint (high care, high overprotection), neglectful parenting (low care, low overprotection), and affectionless control (low care, high overprotection). This appendix includes hypotheses specific to the PBI, a description of the PBI, current findings, and lastly a discussion of the findings.

**Hypothesis 6**

At baseline, adults who experienced optimal or affectionate constraint parenting as a child will exhibit lower shame (i.e., state, trait, implicit) compared to adults who experienced the affectionless control and neglectful parenting styles, and adults in the affectionless control group will exhibit higher levels of shame than adults in the neglectful group.

**Hypothesis 7**

From baseline to post-MIP, individuals categorized in the neglectful or affectionless control groups will show significant changes in state shame, while state shame will remain stable for individuals categorized in the optimal or affectionate constraint groups. Post-MIP, adults in the affectionless control group will report significantly more state shame compared to individuals categorized in the other parenting style groups (i.e., optimal, affectionate constraint, and neglectful), and individuals in the neglectful group will report significantly more state shame than individuals in the optimal and affectionate constraint groups.
Hypothesis 8

Trait shame will remain stable from pre- to post-MIP for individuals in the four parenting style groups.

Hypothesis 9

From pre- to post-MIP, individuals who experienced affectionless control, neglectful, or affectionate constraint parenting styles will exhibit significant changes in implicit shame, while implicit shame will remain stable for individuals who experienced optimal parenting. Post-MIP, individuals categorized in the optimal parenting group will evidence significantly lower implicit shame compared to individuals categorized in the affectionless control, neglectful, and affectionate constraint groups, and individuals in the neglectful and affectionate constraint groups will exhibit significantly lower implicit shame compared to individuals in the affectionless control group.


The Parental Bonding Instrument (PBI; Parker et al., 1979) examines adult recollections of caregiver behaviors and attitudes towards the subject in childhood. It is a self-report measure that consists of 25 items in which participants respond to statements about how they experienced their mother and father prior to the age of 16. For the purpose of the current study, participants completed one PBI form about their primary caregiver (i.e., caregiver with whom you had the most intense attachment). The PBI assesses two factors: Care (i.e., parental warmth and affection as opposed to coldness and rejection) and Overprotection (i.e., parental intrusiveness and psychological control compared to psychological independence and autonomy). Participants respond to statements on a 4-point Likert-type scale, ranging from 0 (Very unlike [my caregiver]) to 3 (Very like [my caregiver]). The PBI contains 12 items assessing Care (e.g.,
“Spoke to me in a warm and friendly voice”) and 13 items examining Overprotection (e.g.,
“Tried to control everything I did”). Based on the Care and Overprotection subscales,
participants can be categorized into one of four quadrants: Optimal Parenting (i.e., high care and
low overprotection), Affectionate Constraint (i.e., high care and overprotection), Neglectful
Parenting (i.e., low care and overprotection), and Affectionless Control (i.e., low care and high
overprotection). Separate norms are used for mothers and fathers for what is considered high and
low Care and Overprotection.

The PBI demonstrates good reliability with reported alphas ranging from .85 to .91 for
the Care and Overprotection subscales for mothers and fathers (Brewin, Firth-Cozens, Furnham,
& McManus, 1992; Richman, & Flaherty, 1986). In the current study, the Care mother (α = .86),
Care father (α = .92), Overprotection mother (α = .94), and Overprotection father (α = .94)
subscales exhibited good to excellent internal consistency. The test-retest reliability in the
original non-clinical sample for Care was \( r = .76 \) and \( r = .63 \) for Overprotection (Mackinnon,
validity ranging from \( r = .69 \) to .85 in correlations with other measures of parental behavior.
Further, in a sample of children, the PBI Care scale was negatively correlated to the EMBU-A
Rejection scale (\( r = .63 \)), and the PBI Overprotection scale was positively correlated with the
EMBU-A Overprotection scale (\( r = .57 \)) (Gerlsma, Arrindell, Van der Veen, & Emmelkamp,

In the current study, 31 participants failed to complete the PBI about a single caregiver,
and instead, when asked to identify which caregiver about whom they completed the measure,
listed two caregivers (e.g., parents, grandparents). These participants were excluded from all PBI
analyses. Ten participants identified their primary caregiver as either their grandmother, aunt,
uncle or stepmother. The applicable norms for high/low care and overprotection that corresponded to the identified caregiver’s gender were used (e.g., the norms for ‘mother’ were applied to participants who named their grandmother).

**Results**

**Hypothesis 6**

A one-way between-groups MANOVA was performed to investigate the hypothesis that individuals categorized by the four PBI parent-child quadrants would significantly differ on state, trait, and implicit shame at baseline. Results indicated no significant group differences, $F(12, 600.88) = 1.50, p = .121$, partial $\eta^2 = .026$ (Tables 15, 16, and 17)

**Hypothesis 7**

A repeated measures MANOVA was conducted to examine changes in state shame by an individual’s parental bond in childhood. Similar to hypothesis 2, state shame was measured by the SSGS and ESS at baseline and following the MIP. Results of the analysis showed there was no significant interaction between parent-child bond and time, Wilks’ Lambda = .97, $F(6, 456) = 1.02, p = .411$, partial $\eta^2 = .013$. There was a significant main effect for time, Wilks’ Lambda = .88, $F(2, 228) = 15.59, p < .001$, partial $\eta^2 = .12$ (medium to large effect) (Table 16). An examination of the pairwise comparisons for time indicated that scores on the SSGS ($p < .001$) and ESS ($p < .001$) significantly increased for individuals in all four of the PBI parental bond categories from baseline to after the MIP.

There was also a main effect for parent-child bond, Wilks’ Lambda = .93, $F(6, 456) = 2.80, p = .011$, partial $\eta^2 = .035$ (small effect) when baseline and post-MIP state shame scores were examined. Consistent with predictions, on the SSGS, students classified in the Affectionless Control group reported significantly more state shame than students classified in
the Affectionate Constraint or Optimal Parenting groups ($p = .045$ and $p = .007$, respectively). Participants in the Optimal Parenting group also scored significantly lower on the SSGS than participants in the Neglectful Parenting group ($p = .007$). With regard to the ESS, there was only one significant pairwise comparison for parent-child bond, individuals categorized in the Affectionless Control group endorsed significantly more state shame than individuals categorized in the Optimal Parenting group participants ($p = .008$).

**Hypothesis 8**

Hypothesis 8 stated that trait shame would remain stable from pre- to post-MIP for individuals in each parental bond category. A one-way repeated measures ANOVA was conducted to compare trait shame at baseline and post-MIP by parent-child bonding categories. Contrary to the hypothesis, there was a PBI classification by time interaction, Wilks’ Lambda = .96, $F(3, 230) = 3.26$, $p = .022$, partial $\eta^2 = .041$ (small effect). There was also a significant main effect for time, Wilks’ Lambda = .97, $F(1, 230) = 7.98$, $p = .005$, partial $\eta^2 = .033$ (small effect) (Tables 17 and 18). Further analysis of the interaction for trait shame and parent-child bond showed that individuals in the Affectionless Control quadrant, $t(47) = -3.74$, $p = .001$, demonstrated significant increases in trait shame, while trait shame for individuals in the Optimal Parenting, Affectionate Constraint, and Neglectful Parenting quadrants remained stable from baseline to after the MIP.

Univariate follow-up tests were run to better understand the unexpected significant change in trait shame from baseline to post-MIP. At baseline, there were significant differences in trait shame by parent-child bond, $F(3, 230) = 3.70$, $p = .012$, partial $\eta^2 = .046$ (small effect). Specifically, individuals in the Affectionless Control group ($M = 39.54$, $SD = 16.50$) reported significantly more trait shame at baseline compared to individuals in the Optimal Parenting ($M =$
29.55, $SD = 19.18$) or Affectionate Constraint group ($M = 30.27, SD = 18.52$). Trait shame scores for students in the Neglectful Parenting group ($M = 36.12, SD = 19.90$) did not significantly differ from the other groups at baseline.

Similar to baseline, there were significant differences in trait shame by parent-child bond post-MIP, $F(3, 230) = 5.86, p = .001$, partial $\eta^2 = .071$ (medium effect). Students classified in the Affectionless Control group ($M = 44.56, SD = 20.24$) continued to score significantly higher on the ISS than students in the Optimal Parenting ($M = 29.73, SD = 21.46$) and Affectionate Constraint groups ($M = 31.00, SD = 20.72$). Trait shame scores for students in the Neglectful Parenting group ($M = 37.56, SD = 23.01$) were not significantly different than students in the other PBI groups following the MIP (Table 15).

**Hypothesis 9**

Changes in implicit shame from baseline to after the MIP by parent-child bond were examined using a repeated measures ANOVA (Table 13). The independent variable was parent-child bond as assessed by the PBI, the dependent variables was implicit shame as measured by ES Shame RTs at baseline and after the MIP, and the within-subjects factor was time. Contrary to predictions, there was no interaction between time and parent-child bond, Wilks’ Lambda = .999, $F(3, 230) = .063, p = .979$, partial $\eta^2 = .001$. Also, no main effect for PBI group difference was found, Wilks’ Lambda = 1.00, $F(1, 230) = .008, p = .928$, partial $\eta^2 < .001$.

**Discussion: Parenting Styles and Shame**

The final relationship that was explored in the current study was between participants’ perceptions of parental responsiveness during childhood and shame in adulthood. Consistent with predictions, participants in the affectionless control group reported significantly more trait shame than participants in the optimal parenting and affectionate constraint groups at baseline.
and following the MIP. These findings indicate that individuals who perceived their primary caregiver as affectionless and demanding reported the highest levels of trait shame. Interestingly, both participants in the affectionless control and affectionate constraint groups experienced high levels of control and overprotection, but differed in their perceived level of parental care. Individuals in the affectionate constraint group experienced high levels of care and warmth, whereas individuals in the affectionless control group experienced low care and affection, suggesting that low parental care specifically, may heighten an individual’s risk of higher trait shame in adulthood.

The current findings are consistent with Lutwak and Ferrari (1997) who found high trait shame in adulthood was associated with participants’ retrospective reports of their mothers as high in over-control and low in affection. Additionally, high trait shame was associated with adults describing their bond with their father as low in warmth and care. Similarly, Gilbert et al. (1996) found in a sample of adults that parental care in childhood was associated with negative evaluations of the whole self by others and the individual themselves in adulthood.

The current study also examined the relationship between state shame and retrospective reports of parenting style, as the only published studies in this area focus on parenting style and trait shame. Consistent with predictions, on the SSGS, a measure of the phenomenological aspects of shame, students in the affectionless control category reported significantly more state shame than students in the optimal parenting and affectionate constraint groups. Participants categorized in the neglectful parenting group also reported significantly more state shame than participants categorized in the optimal parenting group. It is important to note, individuals in the groups characterized by low parental care (i.e., affectionless control and neglectful parenting) reported the highest levels of state shame.
There were fewer significant state shame differences on the ESS, which assesses the physiological, emotional, and social markers of shame experiences. Consistent with the SSGS findings, participants in the affectionless control group scored significantly higher on the ESS than participants in the optimal parenting group. The fewer significant differences on the ESS may be a product of the way in which the ESS assesses state shame. As previously mentioned in the “Discrepancies in State Shame” section, the ESS asks participants to report about their physical and emotional reactions as well as their desire to engage socially. Participants may not have noticed the physical and emotional markers that signaled state shame, and therefore, failed to report these on the ESS.

Overall, the findings regarding trait and state shame suggest that the experience of a caregiver as warm and caring may buffer against an individual internalizing feelings of shame. The current study’s findings provide further empirical evidence for Schore’s (1994) theory of unregulated shame, which proposes that frequent experiences of misattunement by a caregiver that results in a child not receiving adequate help managing and coping with feelings of shame, increases the child’s likelihood of internalizing feelings of shame (i.e., developing trait shame). To further clarify how the current study’s findings fit with Schore’s theory, specific questions that compose the Care subscale of the PBI were examined. Such items as, “[My caregiver] could make me feel better when I was upset” and “[My caregiver] appeared to understand my problems and worries”, specifically measure an adult’s perception of their caregiver’s willingness and ability to help them regulate their affect as a child. As such, a low score on the Care subscale indicates that these students experienced low levels of attunement and help regulating emotion from their caregivers, providing further empirical support for Schore’s (1994) theory of unregulated shame.
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