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Does Self-Compassion Protect Against Emotional Dysregulation, Anxiety, and Other Negative Emotions?

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Does Self-Compassion Protect Against Emotional Dysregulation, Anxiety, and Other Negative Emotions?

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A Thesis Proposal

Presented to

the Faculty of the Department of Psychology

University of South Carolina Aiken

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In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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By

Elizabeth Willits

2015
Abstract

Self-compassion is a multifaceted construct meant to allow individuals to treat themselves with kindness, have a balanced perspective on their experiences, and feel connected to others (Neff, 2003a). Emotion regulation is related to higher levels of self-compassion (Diedrich et al., 2013; Vettese et al., 2011), and Neff (2003a) proposes that self-compassion can be viewed as a superior emotion regulation strategy. Self-compassion is negatively correlated with many forms of psychopathology, including anxiety (Neff, 2003b; Neff et al., 2007; Neff & McGehee, 2010). Based on prior research, it appears that self-compassion may increase the ability to regulation emotions, therefore increasing an individual’s ability to manage anxiety and other negative emotions. The present study examined the relationships between self-compassion, emotion dysregulation, anxiety, and other self-reported emotions. The results of the present study partially supported hypothesized correlations between self-compassion and variables including difficulties in emotion regulation, anxiety, and affect. Furthermore, the present study explored whether self-compassion buffers against negative emotions after imagining an embarrassing and distressing event. The results of the present study indicated that the vignette was effective in reducing positive affect, but ineffective in increasing negative affect and anxiety. Finally this study examined whether a brief self-compassion exercise changes anxiety and other negative emotions after the distressing event when compared to mindfulness and control conditions. The results of the present study found that there were no significant differences between the three conditions.
Does Self-Compassion Protect Against Emotional Dysregulation, Anxiety, and Other Negative Emotions?

**Self-Compassion**

Over the past decade, a concept new to western society has emerged in the field of psychology, namely, self-compassion. The concept of self-compassion stems from Buddhist philosophy, and has existed for centuries. Self-compassion is a construct meant to protect individuals from their own self-judgment, isolation, and self-pity (Neff, 2003a). Self-compassion should not be confused with self-esteem, although, at surface value they seem to be similar. Although low self-esteem is correlated with negative outcomes including depression, research has shown that increasing one’s self-esteem is not easily done and self-esteem appears to be a rather stable trait (Neff, 2001a). In addition to low success with attempts to increase self-esteem, high self-esteem is correlated with inflated views of oneself and even narcissism (Neff, 2001a). Unlike self-esteem, self-compassion can be effectively induced (Leary, Tate, Adams, Batts, & Hancock, 2007), and a number of therapeutic strategies have been shown to effectively deal with difficult emotions (Neff & Germer, 2013; Neff, Kirkpatrick, & Rude, 2007). Furthermore, attempts to increase self-compassion do not carry some of the negative behaviors that may accompany efforts to bolster fragile self-esteem (e.g., self-absorption, denigration of others, etc.) and appears to decrease self-criticism and condemnation when we fail or make mistakes. Rather, self-compassion appears to be an effective tool for managing difficult emotions and for freeing “us from the destructive cycle of emotional reactivity” (Neff, 2011b). By exercising self-compassion, we “avoid destructive
patterns of fear, negativity and isolation” in the face of adversity, while fostering “positive mind-states such as happiness and optimism” (Neff, 2011b, pp. 12-13).

Self-compassion entails three main overlapping components that are described as positive-negative pairs: self-kindness versus self-judgment, common-humanity versus isolation, and mindfulness versus over-identification. Self-compassionate individuals rate high on the adaptive end of the continuum on each of the three components. Furthermore the three components of self-compassion interact with one another rather than as complete separate entities; such that, when one component is strengthened, other components are also strengthened (Neff, 2003b).

The first component of self-compassion is self-kindness rather than self-criticism. Self-kindness involves an individual feeling compassion for and being touched by one’s own suffering rather than being harsh and critical towards oneself (Neff, 2003a). Buddhist philosophy does not differentiate between compassion for others and self-compassion; they are one in the same. In the West, compassion is typically defined as caring for and wanting to ease the pain of others, and it generally does not extend to oneself. Conversely, Buddhist psychology encompasses self-compassion in its definition of compassion, whereby being moved by the suffering of others also includes one’s own suffering, therefore including self-compassion in the definition of compassion itself (Neff, 2003b). Often times, individuals are more open to feeling compassion towards others who are suffering, but do not feel the same about their own pain and distress. The practice of self-compassion can be therapeutic for individuals who are overly critical towards their
own personal suffering by teaching them to treat themselves as they would others and to be less harsh when judging one.

The second component of self-compassion is common humanity rather than isolation. Common humanity is essentially recognizing a sense of connectedness with others, and an understanding that others also suffer in similar situations; rather than viewing one’s problems as isolated and separate from other people (Neff, 2003a). The importance of common humanity is that it helps an individual to understand that her or his own problems (i.e., making mistakes, suffering, and feeling inadequate) are part of the human condition (Neff, 2003b). Common humanity provides a context whereby individuals feel a sense of connectedness which reduces feelings of isolation from others. Isolation and disconnectedness increase feelings of loneliness, and fears of rejection and apprehension. Feelings of isolation arise from social comparisons, self-criticisms, and fears of rejection. As a result of isolated feelings, we often feel anxious and/or depressed. Self-compassion theory suggests that as we begin to view our fears, shortcomings, and disappointments as part of common humanity, we can be more forgiving and compassionate to ourselves and to others. By understanding and embracing our common humanity, we may be less likely to distort perceptions of ourselves and to judge others less harshly in order to protect our own fragile self-esteem (Neff, 2003b).

The third and last component of self-compassion is mindfulness rather than over-identification. Self-compassion defines mindfulness as a way of acknowledging one’s experience in a more objective and balanced manner rather than ignoring pain
or exaggerating the extent of our own suffering (Neff, 2003a). Mindfulness is a way of relating to and accepting our negative and unpleasant experiences, thoughts and feelings in an effort to be less emotionally reactive and distraught (Germer, 2009; Germer, Siegel, & Fulton, 2013). Mindfulness is the practice of being aware of what is happening in the moment without detaching from painful experiences (Neff, 2003b). Mindful self-compassion depends on a willingness to attend and acknowledge experiences without ruminating about the past or fearing the future. By having a balanced perspective, individuals create a mindful “space” to express self-kindness and interconnectedness with others in the context of his or her own distressing or difficult experience (Neff, 2003b).

Self-compassion has been studied in a variety of contexts and recent research has provided interesting and potentially useful results. Self-compassion is highly correlated with positive psychology traits including happiness, optimism, reflective wisdom, personal initiative, and curiosity (Neff et al., 2007).

Individuals high in self-compassion have more adaptive reactions in a variety of situations. In a series of related studies, Leary et al. (2007) found that participants high in self-compassion had more adaptive reactions to unpleasant life events including self-recalled events that were their own fault, hypothetical situations involving failure, loss, and humiliation, and when receiving anonymous negative, neutral, and positive feedback. Furthermore, individuals higher in self-compassion displayed more adaptive reactions to these situations in a manner consistent with the three constructs or facets of self-compassion. For example, when given anonymous feedback, participants high in self-compassion showed less emotional
reactivity and did not over-react to positive or negative feedback. Further, the study showed that self-compassion could be induced and that it protected individuals from becoming overwhelmed by negative emotions even while acknowledging and taking responsibility for mistakes (Leary et al., 2007).

As studies showing the benefits of self-compassion have increased, there is emerging research exploring the mechanisms by which self-compassion develops (Neff, 2009). Maternal attachment style and levels of self-compassion have also been shown to have an inverse relationship with children’s quality of life measures (Moreira, Gouveia, Carona, Silva & Canavarro, 2014). Furthermore, high levels of parental rejection and overprotection in addition to low levels of parental warmth (Pepping, Davis, O’Donovan & Pal, 2015) and higher attachment anxiety (Raque-Bogdan, Ericson, Jackson, Martin & Bryan, 2011) appear to be correlated with lower levels of self-compassion. Beyond the relationship between self-compassion and attachment anxiety, self-compassion has been found to be a mediator between attachment anxiety and well-being in college-students (Wei, Liao, Ku & Shaffer, 2011). Generally, research suggests that more anxious attachment styles are correlated with lower levels of self-compassion, whereas more secure attachment styles are correlated with higher levels of self-compassion. Finally, self-compassion has been found to be a predictor of greater emotion regulation strategies in teens and young adults with substance use disorders and juvenile offenses, and appeared to be a protective factor against the detrimental effects of childhood maltreatment (Vettese, Dyer, Li, & Wekerle, 2011).
In summary there is growing evidence showing the positive effects of self-compassion and reason to believe that it may be helpful for alleviating the suffering of people with psychological disorders. In an attempt to better understand these clinical issues, researchers are exploring new approaches that integrate traditional Western and Buddhist practices including positive psychology, empathy, mindfulness, and self-compassion. Self-compassion is the practice of caring, being kind, and understanding of oneself in times of suffering, and seems like an appropriate approach for understanding individuals with anxiety disorders.

Anxiety

In the most recent study of lifetime prevalence rates (LMR) in adults, Kessler, Petukhova, Sampson, Zaslavsky, and Wittchen (2012) reported that mood disorders (21.4%), specific phobias (i.e., excessive and pathological fears, 13.8%) and social anxiety (11.8%) were the most prevalent. Additionally, teens appear to have the highest rates of mental illness, and experience pronounced comorbidity of both mood and anxiety disorders. Although they differ in terms of major features, personal suffering appears to underlie the most common clinical disorders; whereby “people who are depressed often feel regret, sadness, or guilt about the past and people who are anxious fear the future” (Germer, 2013, p.13).

There is a broad variation in the ways in which anxiety is conceptualized (Endler & Kocovski, 2001), but, for the purposes of this review, anxiety will be defined using the American Psychological Association (APA) Fifth Edition Diagnostic and Statistical Manual (APA, 2013). Anxiety comprises a range of disorders that typically have underlying characteristics of both fear and anxiety where fear is
characterized as the reaction to an immediate threat and anxiety is the expectation of threat in the future (APA, 2013). Threats can either be something that is a real, imminent danger or may be something that is perceived as dangerous. Anxiety disorders are differentiated from other common experiences of fear and anxiety in that the symptoms must persist over at least six months and must interfere with daily functions or cause marked distress (APA, 2013).

In addition to assessing anxiety using a categorical approach as defined by DSM-V, anxiety levels has also been conceptualized from various models, including: state versus trait; dimensions of high to low; and subcategories of both state and trait. First, differences between two facets of anxiety have been studied. Trait anxiety is described as a consistent predisposition to react in an anxious manner across a variety of situations (Endler & Kocovski, 2001). State anxiety pertains to an individual’s level of anxiety at a certain point in time or a particular moment rather than to an overall predisposition to be anxious regardless of the situation (Endler & Kocovski, 2001). Second, trait and state anxiety have been further delineated on dimensions from “high” to “low” (Endler & Kocovski, 2001). Dimensional models of state and trait anxiety provide the opportunity to glean a deeper understanding of the two facets of anxiety. Third, subcategories of both state and trait anxiety have been investigated. Endler and Kocovski (2001) categorize state anxiety as either cognitive-worry and autonomic-emotional while trait anxiety is divided into five sub-categories including social evaluation, physical danger, ambiguous, daily routines, and other-undetermined. By further examining state and trait anxiety into sub-categories; it is possible to examine different aspects in individual more closely.
For example, an individual may be high in “daily routines” trait anxiety, but may show no other signs of anxiety. By investigating both dimensional and subcategories of anxiety, we gain more details about how individuals experience anxiety.

There has been increased interest in understanding the relationship between emotion regulation and different types of psychopathology, including anxiety. Adaptive and maladaptive emotion regulation has been studied both as an etiological factor as well as a mechanism to reduce anxiety (Aldao, Nolen-Hoeksema & Schweizer, 2010). Further, self-compassion has been examined as an emotion regulation strategy that can potentially reduce the psychological suffering of people with various disorders, including anxiety (Neff, 2003a).

**Emotion Regulation, Self-Compassion, and Anxiety**

There is growing evidence that deficits in emotion regulation play a role in a variety of clinical disorders including borderline personality, post-traumatic stress, non-suicidal self-injury, depression, and anxiety disorders (see Gratz & Roemer, 2004, 2008; Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006). Emotion regulation is a process that typically involves tolerating distressing thoughts and emotions rather than suppressing or avoiding them (Aldao et al., 2010; Hayes, Strosahl, & Wilson, 1999). Gratz and Roemer (2003) provide a multifaceted definition for the processes involved in emotion regulation that includes awareness, understanding, and acceptance of emotions. Emotion regulation involves the ability to control behaviors while experiencing intense emotions, and to meet the demands of everyday living while modulating rather than eliminating the experience of intense emotions.
In their review of 114 studies, Aldao et al. (2010) examined three maladaptive (i.e., rumination, suppression and avoidance) and three adaptive emotion regulation strategies (i.e., reappraisal, problem solving, and acceptance). Rumination generally involves excessively or repeatedly focusing on emotional reactions or moods, the situations that caused the reactions or the consequences that follow. Although individuals may use this strategy in an effort to understand their problems, rumination appears to interfere with the ability to effectively moderate emotions (Aldao et al., 2010). Suppressing or avoiding unwanted thoughts, emotions, or sensations often results in just the opposite – increased emotional arousal or hypersensitivity to the unpleasant thoughts. Further, experiential avoidance becomes maladaptive primarily because it appears to increase negative thoughts, interferes with extinction, and may lead to other maladaptive behaviors to avoid aversive events (Aldao et al., 2010).

Although problem solving is not a direct emotion regulation strategy, it is a conscious attempt to change a situation or outcome in order to normalize emotions and has been found to be an adaptive strategy for dealing with stressful situations (Aldao et al., 2010). Reappraisal involves a reinterpretation of distressing experiences in a more neutral or positive light and is an effective emotion regulation strategy commonly employed in cognitive behavioral therapies (Aldao et al., 2010). Lastly, acceptance is an emotion regulation strategy emphasized by various therapeutic approaches including Acceptance Commitment Therapy (ACT) and mindfulness-based therapies (see Birnie-Gico & Cheon, 2014; Hayes et al., 1999; Linehan, 1993). Acceptance-based emotion regulation strategies have been found to
be effective, and typically incorporate a non-judgmental experience of emotions and sensations (Aldao et al., 2010). Strategies that encourage awareness, acceptance, and modulation rather than trying to eliminate or suppress emotions are the cornerstone of emotion regulation theory (Roemer et al., 2009) and are compatible with mindfulness-based and self-compassion approaches. There is evidence that attempts to suppress unpleasant emotions can actually increase the intensity of subjective emotional experiences (Gross & Levenson, 1997; Hayes et al., 1999). Since mindfulness encourages a non-judgmental accepting approach to emotional experiences, it may be more beneficial than suppressing unpleasant emotions. Some of the underlying processes in mindfulness exercises may provide insight into how acceptance serves as an effective emotion regulation strategy.

Current research has explored mindfulness as an effective method of emotion regulation in individuals with a variety of problems including mood and anxiety disorders (Aldao et al., 2010; Roemer et al., 2009; Farb, Anderson & Segal, 2012; Goldin & Gross, 2010). Mindfulness-based strategies focus on the non-judgmental acceptance of emotions and experiences, while other approaches attempt to eliminate or reappraise negative emotions and internal experiences. In their meta-analytic review, Aldao et al. (2010) distinguished between adaptive and maladaptive emotion regulation strategies and reported that attempts to suppress negative emotions actually increased physiological arousal, subjective experiences of distress, and rumination. Further, avoidance strategies interfered with problem solving and increased the risk for other types of psychopathology (e.g., substance-related, eating disorders).
In addition to mindfulness-based approaches, Neff (2003a) investigated whether self-compassion is an effective emotion regulation coping strategy. From a self-compassion perspective, emotion regulation involves embracing emotional experiences as a method for understanding one’s own feelings rather than downplaying or pushing them away (Neff, 2003a). Thus, while self-compassion encompasses processes similar to those aspects of emotion regulation described by Gratz and Roemer’s (2003), it also shows the benefit of approaching personal experiences with self-kindness, common humanity, and mindfulness (Neff, 2003a). Self-compassion appears to enhance emotional regulation by incorporating an expanded view of mindfulness which includes expressing kindness towards self and identifying with others in the face of negative experiences and distressing emotions (Neff, 2003a).

Self-compassion has been shown to be a mediator between severity of childhood maltreatment and emotion dysregulation later in life (Vettese et al., 2011). Specifically, Vettese et al. (2011) found that self-compassion made a significant contribution when predicting emotion dysregulation beyond the severity of childhood maltreatment in young adults in treatment for poly-drug substance abuse, criminal offenses, and other psychological problems. These findings add significantly to our understanding of the complex interaction between early maltreatment, emotion dysregulation and low levels of self-compassion. Although promising, this study did not determine whether self-compassion strategies could be used for treating and reducing emotion regulation deficits in this clinic sample.
Additionally, it is not clear whether higher levels of self-compassion result in lower emotion dysregulation in non-clinical populations as well.

Current research has also investigated whether self-compassion is an effective strategy for managing negative moods in a sample of adults with depressive disorders (Diedrich, Grant, Hofmann, Hiller, & Berking, 2014). In one study the effects of self-compassion strategies were compared to cognitive-reappraisal, acceptance, and wait list control conditions. Following an experimentally induced depressive mood, self-compassion strategies were found to be more effective for regulating emotions than the control condition, and were equally as effective as the cognitive-reappraisal and acceptance conditions (Diedrich et al., 2014). The intensity of baseline depression moderated the comparative effectiveness of the self-compassion and reappraisal conditions, with a non-significant trend for self-compassion to be more effective for individuals with higher levels of depressed mood.

While there is evidence that mindfulness-based and self-compassion strategies can be effective tools to regulate emotions, the underlying components of emotion regulation may potentially explain the etiology of anxiety disorders. Numerous studies have shown that emotion dysregulation is related to anxiety (Amstadter, 2008; Martin & Dahlen, 2005; Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006). Furthermore, Campbell-Sills and Barlow (2007) propose that maladaptive and/or unsuccessful attempts to regulate emotions underlie the development of both anxiety and mood disorders. Thus, it makes sense to explore the effectiveness of techniques that teach emotion-regulation strategies to
determine if they reduce the distress associated with anxiety disorders. Efforts to
decrease emotional distress have emerged over the years, including Emotion
Regulation Therapy (ERT) that integrates traditional cognitive-behavioral therapy
approaches with emotion regulation strategies (Mennin, 2004). In a study of
treatments, Mennin (2004) indicated that ERT produced promising results for
generalized anxiety disorder which has been more resistant to treatment compared
to other anxiety disorders.

Researchers have also examined emotion regulation in clinic populations.
Specifically, Roemer et al. (2009) found that in a sample of individuals diagnosed
with generalized anxiety disorder, individuals reported higher levels of emotion
dysregulation in conjunction with lower levels of mindfulness. The possibility that
anxiety, mindfulness, and emotion regulation are interconnected has been posited,
but there is a need for future research to explore these relationships (Roemer et al.,
2009). It appears that self-compassion may add to our understanding of the
interplay between anxiety, mindfulness, and emotion dysregulation because in
addition to a component of mindfulness, self-compassion also includes elements of
self-kindness and feelings of common humanity. That is, self-compassion
incorporates a sense that “I am not alone in my feelings of being overwhelmed or
distressed.”

In summary, emotion regulation strategies have been employed in a variety
of therapeutic techniques, including Cognitive-Behavioral Therapy (i.e., cognitive
reappraisal) and mindfulness orientation (i.e., acceptance). These strategies have
been found to be effective way of coping with unpleasant experiences and
distressing emotions, including anxiety. Furthermore, approaches to increase self-compassion appear to be promising for increasing adaptive responses to negative events and may be another mechanism of emotion regulation.

**The Relationship between Self-compassion and Anxiety**

There is growing interest in exploring the nature of the relationship between self-compassion and levels of anxiety (Neff & McGehee, 2010). Furthermore, self-compassion has been examined as a possible buffer to anxiety (Neff et al., 2007) and strategies that increase self-compassion have been implemented to determine if they reduce levels of anxiety (Neff & Germer, 2013). A number of studies have found a negative correlation between levels of anxiety and self-compassion (Neff, 2003b; Neff et al., 2007; Neff & McGehee, 2010). Self-compassion may also serve as a resiliency factor that fosters psychological well-being (Neff, 2003a), as research shows that higher self-compassion is correlated with lower levels of psychological distress in general (MacBeth & Gumley, 2012; Van Dam et al., 2011). By reducing harsh self-criticism and/or rumination that occur after stressful events, self-compassion may act as a down-regulating mechanism for handling aspects of anxiety (Van Dam et al., 2011). A recent meta-analysis examining self-compassion revealed that there is a significant negative correlation between psychological disorders including depression, anxiety, and stress and levels of self-compassion (MacBeth & Gumley, 2012).

Pauley and McPherson (2010) interviewed a group of individuals with clinically significant anxiety or depression to analyze their reactions to the concept of self-compassion. Participants reported positive reactions to the idea of
implementing self-compassion and indicated that they felt that it would be useful in dealing with their own problems (Pauley & McPherson, 2010). Although participants in the study expressed concerns about the perceived difficulty of implementing self-compassion, their overall impressions were positive (Pauley & McPherson, 2010). This study suggests that individuals with clinical depression or anxiety perceive the practice of self-compassion in a positive manner.

In an effort to explore the relationship between self-compassion and anxiety, Neff et al. (2007) asked participants to describe their greatest weaknesses. In this study, expressions of self-compassion protected against feelings of anxiety and were associated with the use of plural personal pronouns (e.g., “we” versus “I”). The use of plural personal pronouns suggest that when individuals evaluate their own personal weaknesses as normal, as shared by others or as part of common humanity, that this aspect of self-compassion protects against negative, harsh self-criticisms (Neff et al., 2007).

Although most studies to date have focused on adults, self-compassion also has been found to be a buffer against anxiety in adolescents (Neff & McGehee, 2010). Furthermore, family functioning appears to facilitate the development of self-compassion among adolescents, such that teens with close-knit families report higher levels of self-compassion while teens with high-conflict families report lower levels of self-compassion (Neff & McGehee, 2010). Maternal factors also played a role in that maternal support was associated with higher levels of self-compassion and maternal criticism was related to lower levels. Further feelings of social
connectedness and self-compassion within the family appear to have a positive impact on the overall wellbeing and adjustment of teens.

Based on empirical evidence showing a negative correlation between clinical levels of anxiety and self-compassion, recent studies have examined this relationship in nonclinical populations. Raes (2010) found that both worry and brooding (defined as self-critical moody pondering component of rumination) were significant mediators, worry played a greater indirect role between self-compassion and anxiety; while, brooding significantly mediated self-compassion and depression. It is important to note that although these are not the only factors mediating the relationship between self-compassion and anxiety; the study suggests a unique association between worry and anxiety and suggests that self-compassion is a protective or resiliency factor that may mitigate the development and maintenance of clinical levels of anxiety (Raes, 2010).

In summary, self-compassion and anxiety have an inverse relationship (Neff, 2003b; Neff et al., 2007; Neff & McGehee, 2010) and self-compassion interventions have been found to reduce anxiety (Neff & Germer, 2013). In addition, mindfulness and self-compassion approaches have been found to have positive effects on depression and stress, and to enhance psychological resiliency. Thus, psychologists are interested in designing treatment programs utilizing various components of mindfulness and self-compassion. Various programs implement mindfulness practices including meditation and relaxation in the treatment of a wide range of problems including chronic pain, clinical depression and suicide, trauma experiences, relapse prevention for substance abuse, stress reduction and
personality disorders (Germer et al., 2013). Mindfulness-Based Stress Reduction (MBSR) and Mindfulness Self-Compassion (MSC) are two empirically based treatment programs that have been used to effectively treat individuals in psychological distress.

**Increasing Self-Compassion to Reduce Psychopathology**

Although mindfulness and self-compassion appear to have similar mechanisms and both have positive psychological effects, there are important differences in these constructs (Neff & Germer, 2013). Mindfulness as conceptualized in self-compassion is narrower in focus than mindfulness in general, and refers to “being aware of one’s painful experiences in a balanced way that neither ignores nor ruminates on dislikes aspects of self” (Neff & Germer, 2013, p. 29). Mindfulness in general is more encompassing “refers to the ability to pay attention to any experience – positive, negative or neutral – with acceptance” and appears to be a pre-requisite for self-compassion (Neff & Germer, 2013, p. 29).

Given the positive psychological outcomes, efforts have been made to increase self-compassion using a variety of mindfulness strategies with both formal and informal practices. For example, Bergen-Cico and Cheon (2014) found that meditation practice increased levels of mindfulness that precipitated increased self-compassion and significantly decreased levels of trait anxiety in a nonclinical population. Interestingly, Bergen-Cico and Cheon (2014) collected data from students enrolled in a course that incorporated mindfulness-based stress reduction (MBSR) into the weekly curriculum, while the control group was selected from a course teaching the same material without the incorporation of weekly MBSR work.
During this longitudinal study, mindfulness appeared to develop first, with self-compassion and lowered trait anxiety coming after the heightened mindfulness (Bergen-Cico & Cheon, 2014). While mindfulness-based therapies do not directly implement self-compassion training, they have been found to effectively increase levels of self-compassion in a number of studies (Birnie et al., 2009; Shapiro, Astin, Bishop, & Cordova, 2005; Shapiro, Brown, & Biegel, 2007). It is suggested that the mindfulness component of MBSR is responsible for the increase in self-compassion after the implementation of treatment. There is an overlap between mindfulness and self-compassion as well as mindfulness and empathy, which may be related to the mindfulness and common humanity constructs of self-compassion (Birnie et al., 2009). In addition to MBSR, treatment programs specifically geared towards increasing self-compassion have been developed (Neff & Germer, 2013; Neff et al., 2007).

One of the unique aspects of self-compassion is that unlike self-esteem, self-compassion is more easily learned (Neff, 2003a). Rather than being a stable trait, self-compassion is pliable and more easily increased. This specific aspect of self-compassion makes it an excellent candidate for implementing in therapy to aid in the reduction of symptoms of psychopathology. In order to test this assumption, Neff and Germer (2013) conducted an 8-week Mindfulness Self-Compassion (MSC) program in a randomized controlled trial and found it to be effective for increasing self-compassion and reducing maladaptive traits including anxiety. Not only were these outcomes present after treatment, but they were also present at six month and
one-year follow-ups. These findings suggest that once self-compassion is learned it remains relatively stable and provides protective benefits over time.

In addition to longer programs, self-compassion strategies have the potential to be used in shorter, one-time exercises. Neff, Kirkpatrick, and Rude (2007) conducted a study implementing a Gestalt two-chair dialogue with undergraduate students in a one-time session with a counseling graduate student. This brief exercise was found to increase levels of self-compassion and other positive traits, while decreasing a variety of negative traits including self-criticism and anxiety. This study supports the concept that a brief one-time activity can increase self-compassion while decreasing some traits including anxiety.

There is further evidence that self-compassion can be induced using short activities that don’t require interaction with a therapist. Leary et al. (2007) conducted a series of studies aimed at inducing levels of self-compassion using short, independent writing activity. Participants in the study were instructed to imagine an event that happened to them in the past that was their fault and that resulted in failure, humiliation, and/or rejection. After participants imagined an event from their past, they wrote answers to self-compassion focused questions that they recalled about the humiliating event. In addition to increasing levels of self-compassion, the writing activity also resulted in a reduction of negative emotions compared to a control group.

Research investigating methods for increasing self-compassion in individuals has varied from extended programs, one-time sessions, and independent writing activities. There are also a number of self-compassion exercises and activities that
can be found online (see Neff, 2015), and several self-help books are available that describe practices to increase self-compassion (Germer, 2009; Neff, 2011b). These resources are indicative of the utility and user-friendly nature behind self-compassion. Although there is a need for more research on the therapeutic utility of self-compassion (Neff & Germer, 2013; Neff et al., 2007), there is sufficient evidence suggesting that self-compassion can be increased and that it has positive psychological effects on clinical and nonclinical populations. Based on this brief review, research exploring self-compassion appears promising.

**The Present Study**

Self-compassion is related to a variety of positive outcomes and has been found to be an effective emotion-regulation strategy. Specifically, Germer and Neff (2013) found that self-compassion is a malleable trait that can be increased through various practices, and shows promise as a therapeutic tool to help individuals cope with stressful, negative experiences even after a brief one-time experience (Neff et al., 2007). The present study examined the relationship between self-compassion, deficits in emotion regulation, self-esteem, and self-reported negative emotions. Previous studies have shown that emotion regulation includes aspects of awareness, understanding and acceptance (Gratz & Roemer, 2003, 2008), and that non-judgmental acceptance of emotions is beneficial (Roemer et al., 2009); while, others have investigated the role of self-compassion as an adaptive emotion regulation strategy (Aldao et al., 2010; Diedrich et al., 2014; Neff, 2003a; Vettese et al., 2011). It has also been reported that individuals with high levels of self-compassion possess high levels of self-esteem (Leary et al., 2007: Neff, 2003a). Secondly, the study
investigated whether an experimental task designed to arouse anxiety, embarrassment and isolation increases self-reported negative emotions and anxiety in research participants in a nonclinical sample. Finally, the study explored whether self-compassion can be induced using a brief, self-guided activity and, whether it is helpful for reducing levels of state anxiety. The study examined the differences between a brief self-compassion, a mindfulness exercise and a control condition for reducing self-reported negative emotions. That is, is there anything uniquely beneficial about using components of the self-compassion exercise meant to invoke feelings of self-kindness (versus self-criticism), of connectedness to others (versus isolation), and of mindfulness (versus over-identification) with emotional experiences that is not already captured by doing a short mindfulness exercise?

While there is evidence that both self-compassion (Bergen-Cico & Cheon, 2014; Diedrich et al., 2014; Leary et al., 2007) and mindfulness-based, acceptance approaches (Hayes et al., 1999) are useful for reducing negative emotions, it is not clear whether efforts to increase self-compassion add anything significantly different than mindfulness strategies. A control condition was also used to determine if levels of anxiety and stress simply dissipate over a brief period of time after reading a neutral paragraph about drilling and transporting natural gas to customers. This last component of the study helped determine whether a brief self-compassion exercise mitigates negative emotions.
Hypotheses

Hypothesis 1: High levels of self-compassion as measured by the Self-Compassion Scale (SCS) would be correlated with low scores on Difficulties in Emotional Regulation (DERS), including subscales measuring awareness and understanding of emotions (AWARE), acceptance of emotions (NONACCEPT), ability to refrain from impulsive behaviors (IMPULSE), ability to access strategies to regulate emotions (STRATEGIES), and a lack of clarity of emotions (CLARITY); low levels of self-reported negative emotions (Positive and Negative Affect Schedule, PANAS, Time 1); low levels of state anxiety (State-Trait Anxiety Inventory- State, STAI-S, Time 1), and, high levels of self-esteem (Rosenberg Self-esteem Scale, RSES).

Hypothesis 2: A brief vignette designed to induce anxiety would increase levels of self-reported negative emotions and decrease positive emotions (PANAS, Time 2); and, would increase levels of state anxiety (STAI-S, Time 2). It was anticipated that participants would report more negative emotions (e.g., nervous, ashamed, distressed, etc.) and fewer positive emotions (e.g., interested, proud, enthusiastic, etc.) following a vignette describing academic failure during a class presentation designed to induce distress and anxiety. Participants would also report higher levels of state anxiety (Time 2) after reading the vignette.

Hypothesis 3: The study examined differences between a brief self-compassion and a mindfulness exercise for reducing self-reported negative emotions (Time 3) and state anxiety (Time 3). It was hypothesized that individuals in the self-compassion group would report higher levels of emotional well-being than those in the mindfulness group.
A control condition was used to assess whether anxiety and stress simply dissipate over a brief period of time after reading a neutral paragraph.

**Method**

**Participants**

Table 1 provides demographic information for participants in the current study. There were 75 total undergraduate students, comprised of 14 males and 61 females, who completed the study. In regards to race, 43 participants identified as Caucasian, 27 identified as African American, 3 identified as Hispanic, and 2 participants replied with “other.” Among the participants, 53 indicated that they were freshman, 15 indicated that they were sophomores, 3 indicated that they were juniors, and 1 identified as a senior. Additionally, of the 75 participants, 9 reported that they currently engage in meditative practice. Students in Psychology 101 were enrolled utilizing the SONA system and provided course credit for their participation.

**Measures**

*Demographic Questionnaire* (See Appendix A). Demographic information (i.e., age, gender, race, etc.) was collected using a questionnaire designed specifically for the current study. Demographic data was used to describe the sample under study. Participants were also asked about their previous experiences with mindfulness or mediation practices. This question was asked during the debriefing phase of the study so that participants were not biased prior to the experimental conditions.

*Self-Compassion Scale* (SCS; Neff, 2003b; See Appendix B). The Self-Compassion Scale is a 26-item measure with a 5-point Likert scale (1= Almost never,
Almost always). The Self-Compassion Scale was developed to measure self-compassion based on its three main constructs of self-kindness, common humanity, and mindfulness (Neff, 2003b). The SCS has been found to have good test-retest reliability over a 3-week span. The SCS has good construct validity as indicated by negative correlations with self-criticism as well as positive correlations with social connectedness and trait mood scales. Furthermore, the SCS has been found to have good discriminant validity in relation to other scales designed to measure self-attitudes including the Rosenberg Self-Esteem Scale, the Berger Self-Acceptance Scale, and the Self-Determination Scale. Scores on the SCS are correlated with positive mental health outcomes as indicated by negative correlations with the Beck Depression Inventory and the Speilberger Trait Anxiety Inventory (Neff, 2003b).

*Positive and Negative Affect Schedule* (PANAS; Watson, Clark, & Tellegan, 1988; See Appendix C). The Positive and Negative Affect Schedule is a 20-item measure intended to evaluate moods with both a positive and negative valence. The measure contains a five point Likert scale where participants indicate their current emotional state: 1 = *very slightly or not at all* and 5 = *extremely*. The PANAS is designed to measure positive and negative emotions for the present moment, the past few days, the past few weeks, or in general (Watson et al., 1988). The correlation between the two respective positive and negative affect scales is low, indicating that the scales are measuring different constructs. The PANAS has discriminant validity in regards to other measures that assess for mood and psychopathology. Watson et al. (1988) indicated alpha coefficients in the range of .86 to .90 for the positive affect scale and .84 to .87 for the negative affect scale.
Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004; See Appendix D). The Difficulties in Emotion Regulation Scale is a 36 item measure intended to assess emotion dysregulation (Gratz & Roemer, 2003). The DERS contains a five point Likert scale where: 1 is almost never (0–10%), 2 is sometimes (11–35%), 3 is about half the time (36–65%), 4 is most of the time (66–90%), and 5 is almost always (91–100%). The DERS measures the following aspects of emotion regulation including: (a) awareness and understanding of emotions; (b) acceptance of emotions; (c) the ability to engage in goal-directed behavior, and refrain from impulsive behavior, when experiencing negative emotions; and (d) access to emotion regulation strategies perceived as effective. The DERS is reported to have high internal consistency (α=.93). Construct validity for the DERS was assessed by comparing scores to other emotion regulation tests as well as measures of experiential avoidance and emotional expressivity. Based on the statistical data provided in Gratz and Roemer’s (2003), the DERS proved to be superior to other measures and accounted for significant variability in experiential avoidance and emotional reactivity. Additionally, the DERS was found to have strong validity for predicting self-harm behavior and intimate partner abuse. For the purposes of this study, DERS items were recoded so that higher scores reflected greater difficulties in emotion regulation (i.e., greater emotion dysregulation).

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965; See Appendix E). The Rosenberg Self-Esteem Scale is a ten item measure intended to assess for an individual’s general impression of their self-concept (Rosenberg, 1965). The RSES measures trait self-esteem, that is, the way in which individuals typically view
themselves in a variety of contexts over time. The RSES contains a five point Likert scale where: 1 = *strongly disagree* and 5 = *strongly agree*. The RSES appears to have good internal consistency, with alpha levels greater than .77 (Rosenberg, 1965). The RSES has strong correlations with similar scales including the Self-Liking Scale and the State Self-Esteem Scale, suggesting high validity (Ziegler-Hill, 2010).

*State-Trait Anxiety Inventory- State* (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983; See Appendix F). The STAI- State is a 20-item measure intended to assess current levels of anxiety at the time of testing; that is, how anxious does the person feel in the moment. The STAI uses a four point Likert scale (1= not at all, 4=very much so). The STAI-S has been found to have excellent internal consistency and high test-retest reliability across a variety of studies (Barnes, Harp, & Jung, 2002).

**Procedure**

All of the measures used in the current study were self-report forms. Data were collected in groups of 10 or fewer students in a psychology classroom. The data collected in this study were also used in another ongoing study, therefore a measure of personality traits was included but was not analyzed in the present study. Participants were informed and agreed to complete the additional test prior to starting the experiment.

In Step 1 of the study, students were informed that they would be participating in a study to examine the nature of self-compassion and its relationship to various emotions (See Informed Consent, Appendix K). Participants were informed that their participation was fully voluntary and that they were
allowed to withdraw their consent and discontinue the study at any time without consequence. After the completion of the informed consent process, participants were administered the demographic questionnaire, the Difficulties in Emotion Regulation Scale (DERS), the Self-Compassion Scale (SCS), the Positive and Negative Affect Schedule (PANAS, Time 1), and the State-Trait Anxiety Inventory (STAI-S, Time 1). Each participant received a numbered packet of self-report measures that had been randomly ordered to control for any effects that might occur when responding to the questionnaires.

In Step 2, after completing each of the self-report measures, participants received a vignette designed to elicit negative affective responses including anxiety, distress and embarrassment (See Appendix G). The vignette described a situation involving academic failure and social embarrassment while presenting in class. Participants were asked to read the vignette and to think about how they might feel in a similar situation. Following the vignette, participants were instructed to write three critical comments their professor might make about their performance, three critical comments their classmates might make about how they performed, and three critical comments they might make about themselves in a similar situation. These questions were intended to facilitate the participant’s personal involvement in the vignette and to elicit feelings of anxiety, embarrassment and/or concern about getting a poor grade. The participants were then asked to complete the PANAS (Time 2) and the STAI-S (Time 2).

In Step 3, participants were randomly assigned to one of three experimental conditions: the brief self-compassion activity was specifically designed to increase
feelings of self-acceptance and kindness (See Appendix H); the mindfulness activity was designed to increase present-moment awareness as a strategy to manage stress (See Appendix I); or, a control activity that served as a method for distancing or distracting oneself from unpleasant emotions by reading a passage about natural gas (See Appendix J). Participants received a packet containing one of the three experimental conditions. Each activity was followed by two questions that were designed to encourage participants to actively engage in the activity.

Participants randomly assigned to the self-compassion activity were given a brief explanation of self-compassion, and were asked to respond to their own emotions with kindness and understanding. They were encouraged to recall the vignette (designed to elicit anxiety and worry) and their feelings of distress and emotional discomfort that might arise from the situation. The next prompt instructed participants to acknowledge that they may be “suffering” and to “get in touch” with their feelings (i.e., discomfort, scared, lonely, worthless, etc.); to respond to their own emotions with warmth and kindness; and, to recognize that negative emotions are part of every-day life. This prompt was designed to elicit “common humanity” by recognizing that others might have similar reactions to the same situation. The last prompt instructed participants to show understanding, kindness and concern for themselves in a manner similar to how they might respond to a friend who had experienced the same situation. This last prompt was designed to elicit self-kindness and self-compassion in the face of a stressful event. Finally in an effort to increase engagement in the condition, students were asked to write two thoughts they had while completing the activity.
Participants randomly assigned to the mindfulness exercise read a brief introduction that explained mindfulness as a practice that entails being receptive and non-judgmental about feelings and experiences. Further, participants read that the practice involves attending to the present moment rather than focusing on what happened in the past or what may happen in the future. The “Three Minute Breathing Space” was described “as a practical, effective tool to manage stress, feel more centered.” Participants passively read the three-minute breathing space activity that instructed them to simply observe their breathing as a means to remain in the present-moment. The Three-Minute Breathing Space gave instructions for participants to pay attention to the sensation of the breath whenever they became entangled by thoughts or worries. The mindfulness exercise indicated that the breath was the anchor to being in the present moment. Finally in an effort to increase engagement in the condition, students were asked to write two thoughts they had while completing the activity.

The control activity instructed the participants to read a passage about natural gas. The passage provided factual information about the historical progression of oil drilling. This included information about offshore drilling as well as movable and immovable rigs. The control activity was designed to simply distance or distract the participant from the previous anxiety provoking classroom vignette. Finally in an effort to increase engagement in the condition, students were asked to write two thoughts they had while completing the activity.

In the final step, the PANAS (Time 3) and the STAI-S (Time 3) were administered after completion of the self-compassion, mindfulness or control
exercise. Once the study was completed the researcher provided a debriefing to participants and answered any questions about the purpose of the research. Participants were also asked about prior experiences with mindfulness and/or meditation practices.

**Results**

**Descriptive Information**

Prior to statistical analyses, data were entered into an excel spreadsheet, and were screened for data entry accuracy and missing values. All statistical analyses were conducted using SPSS software. Raw scores on the DERS were coded so that higher scores reflected greater difficulties in emotion regulation, based on guidelines suggested in Gratz and Roemer (2004). Table 2 provides a summary of descriptive statistics for the main study variables, including means, standard deviations, potential and actual raw score ranges. Data was also analyzed to examine the psychometric properties of data within each experimental condition. Table 3 provides a summary of psychometric properties, separated by condition (e.g. self-compassion, mindfulness, and control), including the distribution of means and standard deviations for the variables examined.

ANOVA analyses indicated that there were no significant differences between groups (e.g. self-compassion, mindfulness, and control) on Emotion Regulation \([F (2,72) = .86, p = .43]\), Self Esteem \([F (2,72) = .01, p = .99]\), State Anxiety \([F (2,72) = 1.94, p = .15]\), Positive Affect \([F (2,72) = 2.08, p = .13]\), Negative Affect \([F (2,72) = 1.20, p = .31]\), Trait Anxiety \([F (2, 72) = 1.19, p = .31]\), Self-Compassion \([F (2, 72) = .40, p = .67]\), or Social Anxiety \([F (2, 72) = .41, p = .66]\). Based on these results, it appears that
the randomization of the sample was successful and that there were not any significant differences between study variables in the three conditions.

Finally, prior to data analysis, participant’s scores were averaged rather than summed. Participant’s Likert ratings for items on each measure were averaged to account for missing data, which is mathematically equivalent to comparing scores that have been summed. All participants completed every measure, but some items were unanswered on a handful of measures. Missing data was minimal, and included approximately 15 missing item responses across the entire data set.

**Hypothesis Testing**

Hypothesis 1 stated that high levels of self-compassion (SCS) would be correlated with low levels of difficulties in emotional regulation (DERS) including deficits in awareness and understanding of emotions (DERS-AWARE), acceptance of emotions (DERS-ACCEPT), ability to refrain from impulsive behaviors (DERS-IMPULSE), ability to access strategies to regulate emotions (DERS-STRATEGIES), and a lack of clarity of emotions (DERS-CLARITY); high levels of reported positive emotions (PANAS-POS, Time 1); low levels of self-reported negative emotions (PANAS-NEG, Time 1); low levels of state anxiety (STAI-S, Time 1); and, high levels of self-esteem (RSES). A Pearson’s r correlation matrix was computed to examine the relationships between self-compassion and facets of emotion regulation, self-esteem, and positive emotions, negative emotions, and state anxiety prior to the experimental manipulation. See Table 4 for a full correlation matrix.

There was a strong negative correlation between self-compassion and total scores on emotion dysregulation $r(75) = -0.778$, $p < .000$. When examining subscales
on the DERS, there was a moderate negative correlation between difficulty in awareness and understanding of emotions and self-compassion $r(75) = -.331$, $p < .005$; a strong negative correlation between difficulty in acceptance of emotions and self-compassion $r(75) = -.670$, $p < .000$; a strong negative correlation between difficulty in refraining from impulsive behaviors and self-compassion $r(75) = -.615$, $p < .000$; a strong negative correlation between difficulty in accessing strategies to regulate emotions and self-compassion $r(75) = -.738$, $p < .000$; and, a moderate negative correlation between a lack of clarity of emotions and self-compassion $r(75) = -.327$, $p < .005$. The correlation between self-compassion and self-reported positive emotions was not significant, while there was a moderate negative correlation between self-reported negative emotions $r(75) = -.308$, $p < .05$. There was a moderate negative correlation between state anxiety and self-compassion $r(75) = -.487$, $p < .000$; and, a moderate negative correlation between self-esteem and self-compassion $r(75) = -.336$, $p < .005$. Self-compassion was also negatively correlated with social anxiety $r(75) = -.508$, $p < .000$; and, a strong negative correlation with trait anxiety $r(75) = -.759$, $p < .000$. These data provide partial support for Hypothesis 1.

Hypothesis 2 stated that a brief vignette designed to induce anxiety would increase levels of self-reported negative emotions (PANAS-NEG, Time 2), decrease levels of self-reported positive emotions (PANAS-POS, Time 2), and increase levels of state anxiety (STAI-S, Time 2). It was anticipated that participants would report more negative emotions (e.g., nervous, ashamed, distressed, etc.) and fewer positive emotions (e.g., interested, proud, enthusiastic, etc.) following a vignette describing
academic failure during a class presentation that was designed to induce distress and anxiety. It was anticipated that participants would also report higher levels of state anxiety (Time 2) after reading the vignette.

Three separate paired samples t-tests were conducted to compare differences in scores on positive and negative affect and levels of state anxiety before (Time 1) and after the brief vignette (Time 2). There was not a significant difference between the mean scores for negative emotions before (M=1.48, SD=.55) or after (M=1.47, SD=.50) the brief vignette; t(74) = .336, p=.738 (See Table 5). However, there was a significant difference between the means of positive emotions before (M=3.23, SD=.82) and after (M=3.05, SD=.92) the brief vignette; t(74) = 3.85, p=.000 (see Table 6). Finally, there was not a significant difference between the means of state anxiety before (M=1.77, SD=.60) and after (M=1.78, SD=.60) the brief vignette; t(74) = -.307, p=.760. See Table 7 for t-test results for differences in mean scores for state anxiety. Multiple t-test analyses revealed partial support for Hypothesis 2. The vignette did produce a significant reduction in positive emotions but the anxiety-inducing vignette did not significantly increase negative emotions or levels of state anxiety as anticipated.

Additional exploratory analyses were run to examine whether the vignette was more effective in creating differences between subjects with high and low levels of social anxiety. A median split was utilized to place participants into groups of high and low levels of social anxiety. A series of repeated measures ANOVAs were conducted to examine these differences. A repeated measures ANOVA was conducted to examine the effect of social anxiety on positive affect before and after
the vignette was presented to participants. There was not a significant interaction between positive affect from Time 1 ($M = 3.00, SD = .76$) to Time 2 ($M = 2.77, SD = .81$) and social anxiety [$F(1, 73) = 1.11, p = .30$]. A repeated measures ANOVA was showed that there was not a significant interaction between negative affect from Time 1 ($M = 1.59, SD = .51$) to Time 2 ($M = 1.59, SD = .48$) and social anxiety [$F(1, 73) = .12, p = .73$]. The ANOVA results also did not show a significant interaction between state anxiety from Time 1 ($M = 2.02, SD = .09$) to Time 2 ($M = 2.02, SD = .09$) and social anxiety [$F(1, 73) = .10, p = .92$]. These results provide further support that the vignette did not increase levels state anxiety or negative emotions in individuals with high levels of social anxiety.

Additional repeated measures ANOVAs were also sued to examine whether the vignette was more effective in creating differences between subjects with high and low levels of trait anxiety. A median split was utilized in order to separate the participants into groups of high and low levels of trait anxiety. A repeated measures ANOVA showed that there was a significant interaction between positive affect from Time 1 ($M = 2.99, SD = .77$) to Time 2 ($M = 2.71, SD = .83$) and trait anxiety [$F(1, 73) = 5.14, p = .03$]. However, there was not a significant interaction between negative affect from Time 1 ($M = 1.64, SD = .56$) to Time 2 ($M = 1.64, SD = .55$) and trait anxiety [$F(1, 73) = .16, p = .69$]. Finally there was not a significant interaction between state anxiety from Time 1 ($M = 2.14, SD = .52$) to Time 2 ($M = 2.11, SD = .51$) and trait anxiety [$F(1, 73) = 1.33, p = .25$]. These analyses basically showed that the vignette did not increase state anxiety nor negative emotions even in individuals
with high levels for baseline social or trait anxiety; however positive emotions did were significantly lower for individuals high in trait anxiety at baseline.

Hypothesis 3 stated that individuals randomly assigned to the self-compassion group would report higher levels of emotional well-being (as measured by self-reported positive and negative emotions and levels of state anxiety) than those in the mindfulness group. A control condition was also used to assess whether anxiety and stress simply diminished over a brief period of time after reading a neutral paragraph. This hypothesis specifically investigated whether there is something unique in using a self-compassion script (i.e., showing kindness toward oneself) that is different from the mindfulness script that focused on present moment awareness (i.e., focusing on breath to stay in the moment) or a neutral script that distanced or distracted participants from their induced anxiety. A series of independent one-way between subjects ANOVAs were conducted to compare the effects of the experimental conditions (i.e., control, mindfulness, and self-compassion conditions) on self-reported positive affect, negative affect, and levels of state anxiety.

Results of the first ANOVA showed that the experimental groups did not have a significant effect on positive emotions \(F(2, 72) = 2.584, p = .082\). See Table 8 for these results. The groups also did not significantly impact reports of negative feelings across experimental conditions \(F(2, 72) = 1.265, p = .289\) in the second ANOVA. These results are presented in Table 9. Finally, results of the third ANOVA also showed that the experimental conditions did not show differential effects on levels of state anxiety \(F(2, 72) = 2.727, p = .072\). See Table 10 for one-way ANOVA
results testing for levels of state anxiety across the experimental conditions. State anxiety and emotional affect scores were not significantly different across the self-compassion, mindfulness or control conditions; however, the separate analyses for positive emotions and state anxiety were trending in the predicted directions and approached significance.

Based on these trends, additional exploratory analyses were conducted to further examine whether the experimental conditions of self-compassion and mindfulness differed from the control condition. A post-hoc Tukey test of significance indicated that there was a significant decrease in state anxiety after the mindfulness condition ($M=1.507, SE=.614, p=.033$) when compared to the control condition ($M=1.86, SE=.559$); and, the self-compassion condition ($M=1.562, SE=.558, p=.071$) was approaching significance when compared to the control group. No significant differences were found between the mindfulness and self-compassion conditions on measures of state anxiety ($p=.739$).

Since there was not a significant difference between the mindfulness and self-compassion conditions, these two experimental groups were collapsed into an intervention group for additional comparisons to the control group. A one-way ANOVA was performed and indicated a significant effect for the combined intervention group so that participants who either received the self-compassion or mindfulness condition had significantly lower levels of state anxiety at Time 3 when compared to participants in the control condition [$F(1, 73) = 5.41, p=.023$].

Separate one-way ANOVAs were also performed to examine whether positive and negative affect differed significantly after receiving a brief intervention (self-
compassion or mindfulness) compared to the control group. There were no significant differences between participants in the intervention group and the control group on measures of positive \[ F(1, 73) = 3.08, p = .08 \] and negative affect \[ F(1, 73) = 2.39, p = .13 \]. Based on these results, it appears that the brief intervention did reduce state anxiety but did not significantly impact emotions when compared to the control condition.

**Discussion**

Previous research has examined the various aspects of emotion regulation which include components of awareness, being understanding, and taking an accepting stance (Gratz & Roemer, 2003, 2008). Furthermore, studies have shown that taking a non-judgmental stance towards emotions is beneficial for regulating distressing emotions (Roemer et al., 2009). These studies provide some insight into how constructs of self-compassion may be related to emotion regulation. For example, self-compassion (i.e., practicing self-kindness, viewing one's experience as part of common humanity, and employing mindful awareness) is negatively correlated with deficits in emotional regulation scores. The mechanisms involved with emotional regulation appear to be related to aspects of self-compassion, particularly being aware and accepting emotions, managing emotional impulses, and having strategies to deal with distressing emotions. Other research suggests that self-compassion is potentially an adaptive strategy to regulate emotion (Aldao et al., 2010; Diedrich et al., 2014; Neff, 2003a; Vettese et al., 2011). Furthermore, a handful of studies have examined various treatments and exercises to increase self-compassion in individuals (Bergen-Cico & Cheon, 2014; Leary et al., 2007; Neff &
Germer, 2013; Neff et al., 2007). These studies investigated treatments that range from an 8-week intervention with a mental health professional (Neff & Germer, 2013) to brief multi-step independent writing activities (Leary et al., 2007). Based on these studies, it appears that self-compassion can be increased using a variety of methodologies and serves as an effective intervention for reducing distressing emotions.

Although Leary et al. (2007) reported positive effects for using in-depth and multi-step independent self-compassion exercises, there are no studies that have examined the effectiveness of using a brief self-guided intervention conducted in one session. Current research has not adequately explored the relationship of self-compassion and emotion regulation. Specifically, it has been suggested that self-compassion may be a potential tool for regulating emotions, but the relationships between levels of self-compassion and difficulties in emotion regulation have not been fully explored.

The current study examined the relationships between self-compassion and a variety of variables including difficulties in emotion regulation, state anxiety, self-esteem, and positive and negative affect. Additionally the current study examined whether a brief vignette induced levels of state anxiety and impacted positive and negative emotions. The vignette requested participants take the perspective of a student who delivered a high-stakes presentation (worth 30% of class grade) on the wrong topic; and, who was anxious about how the mistake would affect their class grade, the kind of comments they expected from a professor known to criticize students, and negative comments they expected from peers. Finally participants
were asked how they might judge their own performance in a similar situation. After completing the anxiety provoking vignette, participants were randomly assigned to one of three experimental conditions that were designed to help manage their feelings. It was hypothesized that the self-compassion condition would significantly reduce levels of anxiety and negative emotions compared to the mindfulness and the control conditions.

Hypothesis 1

Hypothesis 1 predicted that high levels of self-compassion would be correlated with low levels of difficulties in emotional regulation including deficits in awareness and understanding of emotions, acceptance of emotions, ability to refrain from impulsive behaviors, ability to access strategies to regulate emotions, and a lack of clarity of emotions. Further, it was expected that self-compassion would be related to high levels of reported positive emotions; low levels of negative emotions; low levels of state, trait and social anxiety; and, high levels of self-esteem. A Pearson’s r correlation matrix was used to examine the relationships among levels of self-compassion and the study variables.

Results of the correlation analyses showed that Hypothesis 1 was partially supported, specifically scores on self-compassion were significantly negatively correlated with the total scores on the Difficulties in Emotion Regulation Scale (DERS). Self-compassion was also significantly negatively correlated with each of the separate facets of the DERS including deficits in awareness and understanding of emotions, acceptance of emotions, ability to refrain from impulsive responding, ability to access strategies to regulate emotions, and lack of clarity of emotions.
These results indicate that individuals higher in self-compassion have fewer difficulties in emotion regulation. Thus, individuals who are more compassionate towards themselves also appear to be better able to regulate responses to difficult experiences and to manage their emotions more effectively.

These current results are consistent with empirical studies that have investigated aspects of self-compassion. Neff (2003a) proposed that self-compassion may be theoretically related to and may serve as an effective emotion regulation strategy. According to Neff’s theory and emerging research, self-compassion may serve as a mechanism for regulating difficult emotions because it involves acknowledging one’s difficult emotions and avoiding harsh self-criticism in the midst of distressing situations. Furthermore, self-compassion involves adopting a kind, compassionate stance towards oneself and the experiences that are causing distress. Finally by recognizing that others might have similar reactions may increase feelings of connection with others, and may be an effective mechanism to regulate strong negative emotions.

The correlations between self-compassion and subscales of the DERS were highly, negatively correlated. Self-compassion incorporates three distinct yet interconnected components (i.e., self-kindness, common humanity, and mindful awareness) which were related to aspects of emotional regulation as measured by the DERS (i.e., awareness, understanding and acceptance of emotions; engaging in goal-directed behaviors; and, using effective strategies). It appears that self-compassion may actually be a form of emotion regulation, and may serve as an effective strategy for coping with stressful, unpleasant feelings. It is also important
to note that there is an overlap in the wording of items on the Self-Compassion Scale and the Difficulties in Emotion Regulation Scale. This would account for the significant correlations between the two measures, and suggests that self-compassion is another form of emotion regulation.

Studies have explored the relationship between cognitive reappraisal and acceptance strategies, and found that self-compassion was equally effective (Diedrich et al., 2014). Interestingly, self-compassion was trending towards being more effective as an emotion regulation strategy for higher levels of depressed mood (Diedrich et al., 2014). Beyond examining the theoretical components of each construct, self-compassion is empirically supported as an equally effective emotion regulation strategy. Past research findings are consistent with the current results that showed significant correlations between study variables. Specifically, individuals with higher levels of self-compassion also had scores suggesting adaptive self-regulation strategies on the DERS subscales. These findings suggest that individuals who are more self-compassionate may also be able to regulate uncomfortable emotions with a variety of effective strategies that help them manage difficult experiences.

In a recent study, Diedrich, Hofmann, Cuijpers, and Berking (2016) investigated the relationship between emotion regulation and self-compassion. The study examined responses of individuals with major depressive disorders after they completed a task designed to further induce depressed mood. Participants were randomly assigned to a control, acceptance, or self-compassion condition, and listened to audio recordings that provided instructions for each condition (Diedrich
et al., 2016). The self-compassion exercise had a significant impact on participant’s ability to successfully implement cognitive reappraisal and to reduce their depressed mood (Diedrich et al., 2016). These findings further support the connection between self-compassion and emotion regulation, proposing that self-compassion can actually enhance the effects of other emotion regulation techniques. The authors indicated that individuals suffering from depression have difficulties implementing some strategies like cognitive reappraisal; and, that self-compassion appeared to enhance their ability to regulate depressive emotions (Diedrich et al., 2016).

Another recent study reported that when compared to progressive muscle relaxation, self-compassion was equally effective for reducing emotion dysregulation in individuals with generalized anxiety disorder (Helm, 2016). These findings provide additional evidence that self-compassion is related to emotion regulation; and, shows that self-compassion increases emotion regulation and may even be a stand-alone emotion regulation strategy. These findings are consistent with the current study that showed significant negative correlations between higher levels of self-compassion and lower levels of difficulties in emotion regulation.

Hypothesis 1 was also partially supported in that self-compassion was significantly negatively correlated with negative emotions but that it was not significantly correlated with positive affect. These results are consistent with the mindfulness component of self-compassion. In the theoretical constructs of self-compassion, mindfulness is a balanced view of oneself that is not overly positive or negative. So, being self-compassionate is not dependent on being happy. It is
interesting that it was hypothesized that individuals high in self-compassion would express more positive affect because they would likely be better at regulating distressing emotions and would also have lower levels of state anxiety. Although, it appears that individuals with high self-compassion in the current sample reported fewer negative emotions, lower levels of anxiety and higher self-regulation strategies, they were not necessarily “happier” as a result. These findings appear to add to our understanding of the nuances of self-compassion theory; in that, being less critical of self, responding with kindness and accepting emotions as they are, does not automatically increase positive emotions. This suggests that other strategies may need to be used to enhance or increase positive emotions. A promising line of research might be to explore whether self-compassion strategies add significantly to other therapeutic strategies designed to promote positive feelings (e.g., behavioral activation strategies).

Although these results make sense from a theoretical perspective, the current findings are only partially consistent with past research. Specifically, Neff, Rude, and Kirkpatrick (2007) found that self-compassion was negatively correlated with negative emotions, and positively correlated with positive psychological traits, including optimism, happiness, wisdom, agreeableness, and extraversion.

In respect to the relationship between self-compassion and state anxiety, Hypothesis 1 was also supported. The results of the current study indicated that self-compassion was negatively correlated with state anxiety. This means that individuals who were higher in self-compassion were also less anxious at Time 1 before the anxiety-inducing vignette. Self-compassion was also negatively
correlated with measures of social and trait anxiety. These results are consistent with other studies showing that self-compassion acts as a buffer against anxiety (Neff et al., 2007).

Lastly, the current study did not find a significant positive correlation between self-compassion and self-esteem, which is largely inconsistent with past studies (Neff & Vonk, 2009; Neff, 2011; Neff, 2003a). Although it is generally believed that self-compassion and self-esteem are correlated, they are not the same trait and there are important distinctions between the two (Neff, 2001a). It has been proposed that self-compassion differs from self-esteem in a number of ways including trait stability and the potential to change over time. Neff suggests that self-compassion does not have the same negative effects that can occur in individuals with high self-esteem including narcissism. In summary, self-compassion appears to be a more malleable trait that can be learned in a rather short period of time; while, self-esteem has been shown to be relatively stable, difficult to change using a variety of interventions and has been associated with negative traits (Bergen-Cico & Cheon, 2014; Leary et al., 2007; Neff & Germer, 2013; Neff et al., 2007).

**Hypothesis 2**

Hypothesis 2 predicted that a brief vignette designed to induce anxiety would increase levels of self-reported negative emotions, decrease levels of self-reported positive emotions, and increase levels of state anxiety. It was anticipated that participants would report more negative emotions (e.g., nervous, ashamed, distressed, etc.) and fewer positive emotions (e.g., interested, proud, enthusiastic, etc.) following a vignette describing academic failure during a class presentation.
that was designed to induce distress and anxiety. It was anticipated that participants would also report higher levels of state anxiety after reading the vignette. Three separate paired samples t-tests were conducted to compare positive affect, negative affect, and anxiety scores before and after the vignette.

Hypothesis 2 was partially supported by results of the current study. Following experimental manipulation, participants reported a significant decrease in positive affect after the anxiety-inducing vignette. These results indicate that there was a significant change between levels of positive emotions after the vignette, and that participants experienced a significant decrease in positive mood. However, there was not a significant corresponding increase in negative affect or levels of state anxiety, which is consistent with past research that has shown that positive and negative emotions are independent (Watson et al., 1988).

In an effort to determine if the vignette produced differential effects on individuals who were either high/low of trait anxiety and high/low on social anxiety, further exploratory analyses were conducted. While the high/low social anxiety groups did not differ in how they reacted to the vignette (e.g., positive and negative emotions or state anxiety), individuals with high trait anxiety did report lower positive emotions. Thus, for the most part the vignette was not effective.

Although positive emotions decreased, the vignette was designed to induce levels of anxiety and to increase negative mood, which did not occur. The vignette provided a brief description of a student who experienced academic failure, and participants were asked to imagine themselves in the situation, were asked to write how they might feel, and to rate their current emotions and level of anxiety. It
appears that positive emotions were more easily impacted than negative emotions including anxiety. Although the vignette was effective in changing positive feelings, it did not significantly impact negative emotions or state anxiety. It is likely that the participants did not fully identify with the scenario; and, that in this sample, negative emotions were more difficult to induce. The relationship between positive and negative emotions warrants further study to explore these emotions interact and the conditions where the change in one also affects the other.

**Hypothesis 3**

Hypothesis 3 predicted that individuals randomly assigned to the self-compassion group would report higher levels of emotional well-being including an increase in self-reported positive emotions, a decrease in negative emotions and lower levels of state anxiety when contrasted to the mindfulness condition. A control condition was also used to assess whether anxiety and stress simply diminished over a brief period of time after reading a neutral paragraph. This hypothesis specifically investigated whether there is something unique in using a self-compassion script (i.e., showing kindness toward oneself) that is different from the mindfulness script that focused on present moment awareness (i.e., focusing on breath to stay in the moment) or a neutral script that distanced or distracted participants from their induced anxiety. A series of independent one-way between subjects ANOVAs were conducted to compare the effects of the experimental conditions (i.e., control, mindfulness, and self-compassion conditions) on self-reported positive affect, negative affect, and levels of state anxiety.
The results of the current study did not support Hypothesis 3, as there was not a significant difference between the three groups on measures of positive and negative affect, nor on levels of state anxiety. There may be of number of factors that contributed to these findings. First, the vignette did not produce significant elevations in negative emotions so it is difficult to make meaningful comparisons between the self-compassion, mindfulness and control conditions. A more salient vignette may have produced more intense levels of anxiety that might have had differential effects across conditions. Second, studies that have reported significant reductions in negative emotions used self-compassion activities that involved interaction with an experimenter or an audio recording that guided participants through the exercise (Diedrich et al., 2016; Bergen-Cico & Cheon, 2014; Neff & Germer, 2013; Neff et al., 2007).

Although Leary et al. (2007) utilized a completely self-guided method similar to the one used in this study but required lengthier writing activities that were more personalized. Although the current study attempted to engage participants by requesting that they answer two questions after completing the passage. However, it is possible that for individuals to reap the full benefits of a self-guided self-compassion activity, exercises need to more personal and engaging, and use more complex questions to elicit stronger emotions. It is also possible that a larger, more diverse sample of students would have produced different results.

Because there was a trend toward a significant increase in positive affect and a decrease in levels of state anxiety across experimental conditions, further exploratory analyses were conducted. When the self-compassion and mindfulness
groups were combined, these were more effective for reducing state anxiety when compared to the control, neutral condition. However, there no change in positive or negative emotions across conditions. These findings suggest that aspects of self-compassion and/or mindfulness are more helpful than reading a passage meant to distance or distract a person from unpleasant feelings. Future research may help to more clearly identify the effects and mechanisms of these various strategies.

**Study Limitations**

The current study had a number of limitations that warrant discussion. Based on the results of Hypothesis 2, it appears that the vignette designed to induce anxiety was not successful even though it did reduce positive emotions. It is possible that participants were in a more regulated emotional state upon arriving and agreeing to participate in the study procedure. A more realistic task (e.g., having participants video tape a presentation) may have elicited higher levels of anxiety or distressing emotions. This may have resulted in a more rigorous and meaningful contrast between the control, mindfulness, and self-compassion conditions.

A recent study successfully induced depressed mood in participants with premorbid depression and demonstrated that a self-compassion exercise did produce positive outcomes (Diedrich et al., 2016). In this study, depressed mood was induced by having participants listen to sad music and to read a list of negative statements directed towards oneself. It appears that the vignette used to induce anxiety in the current study was not powerful enough to increase levels of anxiety and negative affect, and thus did not allow for an adequate test of differences.
between the experimental conditions (i.e., self-compassion versus mindfulness and control).

A second limitation of the current study is that data were collected in small groups of ten participants or less. This may have distracted some participants, and/or may affected whether they fully engaged in the anxiety producing vignette and in the self-compassion and mindfulness activities. Further, the sample in the current study used an undergraduate population, with participants from a Psychology 101 course who signed up to receive course credit. Due to this incentive, participants may have been less emotional engaged in the vignette and/or may have finished the experiment simply to earn credits. Another limitation of the current study, was that this was not a clinical population. Although there was some variability in scores on the measures of emotion regulation, state and trait anxiety, and social anxiety, a more anxious group would likely respond differently to the experiment.

Another limitation of the current study is the relatively small sample size (N = 75). This sample size may have not been large enough to produce significant results in regards to the vignette and the mindfulness and self-compassion activities. It is possible that a larger sample would have been more powerful for detecting subtle differences in the experimental conditions, especially since the results testing Hypothesis 3 were trending towards significance. It is also possible that a more diverse sample of students that included graduate students, upper-level undergraduate students and/or honors students would have produced different results. These variables should be explored in future studies.
A final limitation of the current study is that the procedures used to induce anxiety and to develop self-compassion or mindfulness were self-guided, where students read passages and wrote responses to questions. Other studies have induced depression and anxiety states using experimenters that guided participants through the emotion-induction and self-regulation conditions (Leary et al., 2007). Furthermore, research has shown that trained research assistants (Bergen-Cico & Cheon, 2014; Neff & Germer, 2013; Neff et al., 2007) and/or audio recordings that guide participants through a self-compassion activity produced different results (Diedrich et al., 2016). It is likely that higher levels of personal guidance (even audio recordings) or social interaction are more effective than reading passages to effect emotions including anxiety. As it was designed, the study may have allowed participants to passively read the passages without becoming emotionally engaged with the activities.

**General Conclusions and Future Directions**

Despite the limitations, the current study did contribute to the growing evidence showing a relationship between self-compassion, aspects of emotion regulation and positive emotions. Not only did the results indicate a general negative correlation between self-compassion and difficulties in emotion regulation, but it also indicated correlations with more specific facets of emotion regulation including deficits in awareness and understanding of emotions, acceptance of emotions, ability to refrain from impulsive behaviors, ability to access strategies to regulate emotions, and a lack of clarity of emotions. These findings provide support of the growing evidence that self-compassion is related to and may enhance emotion
regulation strategies (Diedrich et al., 2016), and may serve as a brief strategy for regulating distressing emotions (Neff, 2003a).

Although results of this study did not produce significant findings when comparing control, self-compassion, and mindfulness interventions, there were trends towards significance particularly for changing positive emotions and levels of state anxiety. However, when the self-compassion and mindfulness groups were combined, the strategies were more effective in reducing state anxiety than simply reading a neutral passage designed to distance or distract participants.

Future studies should address the limitations previously described including using: a larger and more diverse sample of students; a more personalized or realistic activity that induces stronger levels of anxiety and distressing emotions; and, a clinical sample of individuals with significantly elevated levels or subclinical levels of anxiety and/or negative emotions including depression. Finally, future studies should also explore other independent self-compassion activities to determine if longer exposure or different methods of delivery (experimenter versus taped instructions) produce different outcomes.
Table and Figure Content

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Table 4  Correlation Matrix

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Table 6  Results of t-test and Descriptive Statistics for Negative Affect

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Table 8  Summary of ANOVA for PANAS – Positive Affect

Table 9  Summary of ANOVA for PANAS – Negative Affect

Table 10 Summary of ANOVA for STAI – State Anxiety
### Table 1

**Participant Demographics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Percent of Sample</th>
</tr>
</thead>
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<td>Ethnicity</td>
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<td></td>
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<tr>
<td>Caucasian</td>
<td>43</td>
<td>57.3%</td>
</tr>
<tr>
<td>African American</td>
<td>27</td>
<td>36%</td>
</tr>
<tr>
<td>Hispanic</td>
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<td>4%</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2.6%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>18.6%</td>
</tr>
<tr>
<td>Female</td>
<td>61</td>
<td>81.3%</td>
</tr>
<tr>
<td>Class Year</td>
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<td></td>
</tr>
<tr>
<td>Freshman</td>
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<tr>
<td>Sophomore</td>
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</tr>
<tr>
<td>Junior</td>
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<td>Senior</td>
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</tr>
<tr>
<td>Meditative Practice</td>
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<td>12%</td>
</tr>
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</table>

*Note.* Total sample size $N = 75$. 
Table 2

*Psychometric Properties of Major Study Variables: Summed Scores*

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<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Potential</th>
<th>Actual</th>
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</thead>
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<td>1 - 5</td>
<td>39 - 116</td>
</tr>
<tr>
<td>DERS</td>
<td>88.21</td>
<td>26.60</td>
<td>1 - 5</td>
<td>43 - 151</td>
</tr>
<tr>
<td>RSES</td>
<td>29.20</td>
<td>2.49</td>
<td>1 - 5</td>
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</tr>
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<td>SAIS</td>
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<td>13.67</td>
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</tr>
<tr>
<td>PANAS-POS</td>
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<td>10 - 31</td>
</tr>
</tbody>
</table>

*Note.* STAI-S = State Trait Anxiety Inventory, State Anxiety measured at Time 1; SCS = Self-Compassion Scale; DERS = Difficulties in Emotion Regulation Scale; RSES = Rosenberg Self Esteem Scale; SAIS = Social Anxiety Interaction Inventory; PANAS-POS = Positive and Negative Affect Scale, positive affect, measured Time 1; PANAS-NEG = Positive and Negative Affect Scale, measured at Time 1.
### Table 3

*Psychometric Properties of Major Study Variables: Separated by Condition*

<table>
<thead>
<tr>
<th>Self-Compassion</th>
<th>$M$</th>
<th>$SD$</th>
<th>Min</th>
<th>Max</th>
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<tr>
<td>DERS</td>
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<td>1.36</td>
<td>3.50</td>
</tr>
<tr>
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<td>4.60</td>
</tr>
<tr>
<td>PANAS-NEG</td>
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<td>.58</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>RSES</td>
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<td>.22</td>
<td>2.40</td>
<td>3.30</td>
</tr>
<tr>
<td>SIAS</td>
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<td>.61</td>
<td>.40</td>
<td>2.85</td>
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<table>
<thead>
<tr>
<th>Mindfulness</th>
<th>$M$</th>
<th>$SD$</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAI-T</td>
<td>2.06</td>
<td>.54</td>
<td>1.20</td>
<td>3.25</td>
</tr>
<tr>
<td>SCS</td>
<td>3.10</td>
<td>.70</td>
<td>1.92</td>
<td>4.23</td>
</tr>
<tr>
<td>STAI-S</td>
<td>1.58</td>
<td>.53</td>
<td>1.00</td>
<td>2.55</td>
</tr>
<tr>
<td>DERS</td>
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<td>.92</td>
<td>1.19</td>
<td>4.19</td>
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<tr>
<td>PANAS-POS</td>
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<td>1.90</td>
<td>4.90</td>
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<tr>
<td>PANAS-NEG</td>
<td>1.35</td>
<td>.50</td>
<td>1.00</td>
<td>2.60</td>
</tr>
<tr>
<td>RSES</td>
<td>2.92</td>
<td>.29</td>
<td>2.60</td>
<td>3.70</td>
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<td>SIAS</td>
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<table>
<thead>
<tr>
<th>Control</th>
<th>$M$</th>
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<th>Min</th>
<th>Max</th>
</tr>
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<td>PANAS-NEG</td>
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<td>2.92</td>
<td>.23</td>
<td>2.30</td>
<td>3.40</td>
</tr>
</tbody>
</table>

*Note. STAI-S = State Trait Anxiety Inventory, State Anxiety measured at Time 1; SCS = Self-Compassion Scale; DERS = Difficulties in Emotion Regulation Scale; RSES = Rosenberg Self Esteem Scale; SAIS = Social Anxiety Interaction Inventory; PANAS-POS = Positive and Negative Affect Scale, positive affect, measured Time 1; PANAS-NEG = Positive and Negative Affect Scale, measured at Time 1.*
**Table 4**

<table>
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<th>4</th>
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<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
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<td>1 SCS</td>
<td>-</td>
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<td>-0.670**</td>
<td>-0.598**</td>
<td>-0.615**</td>
<td>-0.331**</td>
<td>-0.738**</td>
<td>-0.327**</td>
<td>0.206</td>
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<td>-0.487**</td>
<td>-0.336**</td>
<td>-0.508**</td>
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</tr>
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<td>-0.772**</td>
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<td>0.914**</td>
<td>-0.214</td>
<td>0.312**</td>
<td>0.428**</td>
<td>0.266*</td>
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<tr>
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<td>0.556**</td>
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<td>0.757**</td>
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<td>0.258*</td>
<td>0.419**</td>
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<td>0.400**</td>
<td>0.677**</td>
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</tr>
<tr>
<td>4 GOALS</td>
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<td>0.717**</td>
<td>0.474**</td>
<td>-</td>
<td>0.545**</td>
<td>0.160</td>
<td>0.589**</td>
<td>-0.028</td>
<td>0.266*</td>
<td>0.255*</td>
<td>0.261*</td>
<td>0.352**</td>
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<tr>
<td>5 IMPULSE</td>
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<td>0.772**</td>
<td>0.556**</td>
<td>0.545**</td>
<td>-</td>
<td>0.133</td>
<td>0.714**</td>
<td>0.296**</td>
<td>0.072</td>
<td>0.299**</td>
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<td>6 AWARE</td>
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<td>0.227</td>
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</tr>
<tr>
<td>7 STRATEGIES</td>
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<td>0.914**</td>
<td>0.757**</td>
<td>0.589**</td>
<td>0.714**</td>
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<td>0.472**</td>
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<td>-0.028</td>
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<td>0.312**</td>
<td>0.258*</td>
<td>0.266*</td>
<td>0.299**</td>
<td>0.107</td>
<td>0.271*</td>
<td>0.123</td>
<td>-0.038</td>
<td>-0.569**</td>
<td>0.263*</td>
<td>0.228*</td>
<td>0.346**</td>
<td></td>
</tr>
<tr>
<td>11 STAI-S</td>
<td>-0.487**</td>
<td>0.428**</td>
<td>0.419*</td>
<td>0.255*</td>
<td>0.128</td>
<td>0.309**</td>
<td>0.432**</td>
<td>0.288*</td>
<td>-0.466**</td>
<td>0.569**</td>
<td>-</td>
<td>0.369**</td>
<td>0.412**</td>
<td>0.634**</td>
</tr>
<tr>
<td>12 RSES</td>
<td>-0.336**</td>
<td>0.266*</td>
<td>0.336**</td>
<td>0.261*</td>
<td>0.194</td>
<td>0.155</td>
<td>0.207</td>
<td>0.129</td>
<td>-0.308**</td>
<td>0.263*</td>
<td>0.369**</td>
<td>-</td>
<td>0.495**</td>
<td>0.459**</td>
</tr>
<tr>
<td>13 SAIS</td>
<td>-0.508**</td>
<td>0.493**</td>
<td>0.400**</td>
<td>0.352**</td>
<td>0.276*</td>
<td>0.375**</td>
<td>0.458**</td>
<td>-0.284*</td>
<td>0.228*</td>
<td>0.412**</td>
<td>0.495**</td>
<td>-</td>
<td>0.655**</td>
<td></td>
</tr>
<tr>
<td>14 STAI-T</td>
<td>-0.759**</td>
<td>0.768**</td>
<td>0.677**</td>
<td>0.453**</td>
<td>0.511**</td>
<td>0.346**</td>
<td>0.764**</td>
<td>0.512**</td>
<td>-0.329**</td>
<td>0.346**</td>
<td>0.634**</td>
<td>0.459**</td>
<td>0.655**</td>
<td>-</td>
</tr>
</tbody>
</table>

* = p < .05  
** = p < .01

*Note.* SCS = Self-Compassion Scale; DERS = Difficulties in Emotion Regulation Scale; NONACCEPT: Non-acceptance subscale of Difficulties in Emotion Regulation Scale; GOALS: Goals subscale of Difficulties in Emotion Regulation Scale; IMPULSE: Impulse subscale of Difficulties in Emotion Regulation Scale; AWARE; Awareness subscale of Difficulties in Emotion Regulation Scale; STRATEGIES: Strategies subscale of Difficulties in Emotion Regulation Scale; CLARITY: Clarity subscale of Difficulties in Emotion Regulation Scale; PANAS-POS = Positive and Negative Affect Scale, positive affect, Time 1; PANAS-NEG = Positive and Negative Affect Scale, negative affect, Time 1; STAI-S1 = State Trait Anxiety Inventory, State, Time 1; RSES = Rosenberg Self Esteem Scale; SAIS = Social Anxiety Interaction Scale; STAI-T = State Trait Anxiety Inventory, Trait.
Table 5

Results of t-test and Descriptive Statistics for Negative Affect

<table>
<thead>
<tr>
<th>Outcome</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>n</th>
<th>95% CI for Mean Difference</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANAS-NEG</td>
<td>1.48</td>
<td>.55</td>
<td>1.47</td>
<td>.50</td>
<td>75</td>
<td>-.09, .12</td>
<td>.64</td>
<td>.34</td>
<td>74</td>
</tr>
</tbody>
</table>

p = .738

Note. PANAS-NEG = Positive and Negative Affect Scale, change scores in negative affect (Time 1 to Time 2).
Table 6

*Results of t-test and Descriptive Statistics for Positive Affect*

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Before Anxiety Vignette M</th>
<th>SD</th>
<th>After Anxiety Vignette M</th>
<th>SD</th>
<th>n</th>
<th>95% CI for Mean Difference</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANAS-POS</td>
<td>3.23</td>
<td>.82</td>
<td>3.05</td>
<td>.92</td>
<td>75</td>
<td>.09, .27</td>
<td>.90**</td>
<td>3.85</td>
<td>74</td>
</tr>
</tbody>
</table>

**p < .001

Note. PANAS-POS = Positive and Negative Affect Scale, change scores in positive affect (Time 1 to Time 2).
Table 7

Results of t-test and Descriptive Statistics for State Anxiety

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Before Anxiety Vignette</th>
<th>After Anxiety Vignette</th>
<th>95% CI for Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAI-S</td>
<td>M: 1.77, SD: .60</td>
<td>M: 1.78, SD: .60</td>
<td>-0.02, 0.08</td>
</tr>
<tr>
<td></td>
<td>n: 75</td>
<td></td>
<td>r: 0.76, t: -0.31, df: 74</td>
</tr>
</tbody>
</table>

p = .760

Note. STAI-S = State Trait Anxiety Inventory, change scores in State Anxiety (Time 1 to Time 2).
Table 8

*Summary of ANOVA for PANAS – Positive Affect Measured at Time 3*

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5.25</td>
<td>2</td>
<td>2.63</td>
<td>2.58</td>
</tr>
<tr>
<td>Within Groups</td>
<td>73.12</td>
<td>72</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>78.37</td>
<td>74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. PANAS = self-reported positive affect on the Positive and Negative Affect Scale measured at Time 3 after the experimental conditions.*
Table 9
*Summary of ANOVA for PANAS – Negative Affect Measured at Time 3*

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.60</td>
<td>2</td>
<td>.30</td>
<td>1.27</td>
<td>.289</td>
</tr>
<tr>
<td>Within Groups</td>
<td>17.18</td>
<td>72</td>
<td>.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17.78</td>
<td>74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. PANAS = self-reported negative affect on the Positive and Negative Affect Scale measured at Time 3 after the experimental conditions.*
Table 10

*Summary of ANOVA for STAI – State Anxiety Measured at Time 3*

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.82</td>
<td>2</td>
<td>.91</td>
<td>2.73</td>
<td>.072</td>
</tr>
<tr>
<td>Within Groups</td>
<td>24.07</td>
<td>72</td>
<td>.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>25.90</td>
<td>74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* STAI = State Trait Anxiety Inventory, State, measured at Time 3 after the experimental conditions.
Appendix A

Demographic Questionnaire

1. Gender (circle one):
   Female
   Male

2. Age ______

3. Please circle one of the following to indicate your primary ethnic identity:
   A. African American
   B. Asian American
   C. White, non-Hispanic
   D. White, Hispanic
   E. Middle Eastern
   F. Other: ______________

4. Please circle year of school you are currently in:
   A. Freshman
   B. Sophomore
   C. Junior
   D. Senior
   E. Other: ___________  

5. Do you currently engage in any type of meditative practice? (Circle one):
   YES
   NO
Appendix B

Self-Compassion Scale

**HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES**

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Almost Never</td>
<td></td>
<td></td>
<td></td>
<td>Almost Always</td>
</tr>
</tbody>
</table>

___ 1. I’m disapproving and judgmental about my own flaws and inadequacies.  
___ 2. When I’m feeling down I tend to obsess and fixate on everything that’s wrong. ___ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.  
___ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.  
___ 5. I try to be loving towards myself when I’m feeling emotional pain.  
___ 6. When I fail at something important to me I become consumed by feelings of inadequacy.  
___ 7. When I’m down and out, I remind myself that there are lots of other people in the world feeling like I am.  
___ 8. When times are really difficult, I tend to be tough on myself.  
___ 9. When something upsets me I try to keep my emotions in balance.  
___ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.  
___ 11. I’m intolerant and impatient towards those aspects of my personality I don’t like.  

___ 12. When I’m going through a very hard time, I give myself the caring and tenderness I need.  
___ 13. When I’m feeling down, I tend to feel like most other people are probably happier than I am.  
___ 14. When something painful happens I try to take a balanced view of the situation. ___ 15. I try to see my failings as part of the human condition.  
___ 16. When I see aspects of myself that I don’t like, I get down on myself.  
___ 17. When I fail at something important to me I try to keep things in perspective.  

___ 18. When I’m really struggling, I tend to feel like other people must be having an easier time of it.
19. I'm kind to myself when I'm experiencing suffering.
20. When something upsets me I get carried away with my feelings.
21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
22. When I'm feeling down I try to approach my feelings with curiosity and openness.
23. I'm tolerant of my own flaws and inadequacies.
24. When something painful happens I tend to blow the incident out of proportion.
25. When I fail at something that's important to me, I tend to feel alone in my failure.
26. I try to be understanding and patient towards those aspects of my personality I don't like.
Appendix C

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel at the present moment. Use the following scale to record your answers.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Slightly or Not at All</td>
<td>A Little</td>
<td>Moderately</td>
<td>Quite a Bit</td>
<td>Extremely</td>
</tr>
</tbody>
</table>

_______ 1. Interested
_______ 2. Distressed
_______ 3. Excited
_______ 4. Upset
_______ 5. Strong
_______ 6. Guilty
_______ 7. Scared
_______ 8. Hostile
_______ 9. Enthusiastic
_______ 10. Proud

_______ 11. Irritable
_______ 12. Alert
_______ 13. Ashamed
_______ 14. Inspired
_______ 15. Nervous
_______ 16. Determined
_______ 17. Attentive
_______ 18. Jittery
_______ 19. Active
_______ 20. Afraid
Appendix D

Difficulties in Emotion Regulation Scale

Please indicate how often the following statements apply to you by writing the appropriate number from the scale below on the line beside each item:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost never</td>
<td>Sometimes</td>
<td>About half the time</td>
<td>Most of the time</td>
<td>Almost always</td>
</tr>
<tr>
<td>0-10%</td>
<td>11-35%</td>
<td>36-65%</td>
<td>66-90%</td>
<td>91-100%</td>
</tr>
</tbody>
</table>

1) I am clear about my feelings.
2) I pay attention to how I feel.
3) I experience my emotions as overwhelming and out of control.
4) I have no idea how I am feeling.
5) I have difficulty making sense out of my feelings.
6) I am attentive to my feelings.
7) I know exactly how I am feeling.
8) I care about what I am feeling.
9) I am confused about how I feel.
10) When I’m upset, I acknowledge my emotions.
11) When I’m upset, I become angry with myself for feeling that way.
12) When I’m upset, I become embarrassed for feeling that way.
13) When I’m upset, I have difficulty getting work done.
14) When I’m upset, I become out of control.
15) When I’m upset, I believe that I will remain that way for a long time.
16) When I’m upset, I believe that I’ll end up feeling very depressed.
17) When I’m upset, I believe that my feelings are valid and important.
18) When I’m upset, I have difficulty focusing on other things.
19) When I’m upset, I feel out of control.
20) When I’m upset, I can still get things done.
21) When I’m upset, I feel ashamed with myself for feeling that way.
22) When I’m upset, I know that I can find a way to eventually feel better.
23) When I’m upset, I feel like I am weak.
24) When I’m upset, I feel like I can remain in control of my behaviors.
25) When I’m upset, I feel guilty for feeling that way.
26) When I’m upset, I have difficulty concentrating.
27) When I’m upset, I have difficulty controlling my behaviors.
28) When I’m upset, I believe that there is nothing I can do to make myself feel better.
29) When I’m upset, I become irritated with myself for feeling that way.
30) When I’m upset, I start to feel very bad about myself.
31) When I’m upset, I believe that wallowing in it is all I can do.
32) When I’m upset, I lose control over my behaviors.
33) When I’m upset, I have difficulty thinking about anything else.
34) When I’m upset, I take time to figure out what I’m really feeling.
35) When I’m upset, it takes me a long time to feel better.
36) When I’m upset, my emotions feel overwhelming.
Appendix E

Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. For each of the questions in the next section, write in the number from the scale, which best describes how you feel about the statement.

1 = Strongly Disagree  2 = Disagree  3 = Undecided  4 = Agree  5 = Strongly Agree

___1. I feel that I’m a person of worth, at least on an equal plane with others.

___2. On the whole, I am satisfied with myself.

___3. I wish I could have more respect for myself.

___4. I certainly feel useless at times.

___5. At times I think I am no good at all.

___6. I feel that I have a number of good qualities.

___7. All in all, I am inclined to feel that I am a failure.

___8. I am able to do things as well as most other people.

___9. I feel that I do not have much to be proud of.

___10. I take a positive attitude toward myself.
Appendix F

State-Trait Anxiety Inventory- State

SELF-EVALUATION QUESTIONNAIRESTAI Form Y-1

Please provide the following information:
Name________________________________ Date______________
Age____________ Gender (Circle) M F T____

DIRECTIONS:
A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel calm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I feel secure.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I am tense.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I feel strained.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I feel at ease.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I feel upset.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I am presently worrying over possible misfortunes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I feel satisfied.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I feel frightened.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I feel comfortable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I feel self-confident.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I feel nervous.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I am jittery.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I am relaxed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I feel content.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I am worried.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. I feel confused.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I feel steady.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I feel pleasant.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix G

Vignette

Imagine yourself in the following situation:

You are assigned to give a 25 minute long presentation for your Psychology 101 class. The presentation requires you to give a thorough summary of a book chapter from your text as well as your interpretation. The presentation is 30% of your final grade. You have been nervous about presenting for a few weeks since this professor is often critical of student's presentations and will provide harsh feedback immediately after presenting. You spend extra time preparing for the presentation, ensuring that you know every detail about the chapter. You practice presenting for days in advance, making sure you won't freeze up at the front of the class.

Upon arrival to your class, the professor calls you to the front of the room to begin your presentation. You reach inside of your backpack to grab your notecards and walk to the front of the room. You feel a knot in your stomach while you imagine what your professor may say about your presentation. Your hands are trembling as you begin to speak.

After 3 minutes of presenting on the material, you notice that something is not quite right. You look around the room and many students look confused. Your professor has a concerned look on her face. The knot in your stomach tightens and your face feels hot. You continue to present and suddenly realize that you prepared your entire presentation on the wrong chapter. You notice your classmates looking at each other and laughing. You hesitate but continue to present, stuttering often, and becoming red with embarrassment. As you are presenting, you begin to anticipate the variety of critical remarks your professor will have for you...
Please respond to the following questions:

Write 2 extremely critical comments you anticipate receiving from your professor after completing the presentation.
1. 
2. 

Write 2 extremely critical comments you anticipate your classmates would make about your presentation.
1. 
2. 

Write 2 extremely self-critical comments you would make about your performance on the presentation.
1. 
2.
Appendix H
Self-Compassion Activity

Self-compassion is acknowledging one’s own suffering, just like you would acknowledge the suffering of a friend. Self-compassion is responding to your own suffering with warmth and kindness rather than harshly criticizing yourself. Self-compassion involves being kind to yourself, recognizing that others also have situations similar to your own, and having a balanced view of your situation. Below is a self-compassion exercise.

Recall the situation you read earlier. See if you can feel the stress and emotional discomfort caused by the situation.

To start the self-compassion activity, find a comfortable seated position. Take a few deep breaths to settle into your body and the present moment. You are right here, right now.

- First, gently get in touch with the source of your suffering. Are you feeling scared, lonely, angry, worthless, frustrated? See if you can just be with the emotions as they are, without doing too much thinking about the story line driving the emotions (what you did, what he didn’t do, etc.). Whatever you are feeling is okay. All visitors are welcome. No need to cling to anything or to push it away.
- Now see if you can sense the emotions in your body. Let’s say you feel sad. What does sadness feel like? Is there dullness, a pulling sensation at the corner of your eyes, tenseness between your eyebrows, and so on? By locating your emotions in your body, it’s easier to feel them without getting lost in thought, and instead be with your present moment experience as it is.
- Now place your hand on your heart, and set your intention to offer yourself kindness, understanding, and compassion for the suffering you’re experiencing right now. Remember that what you’re feeling is an integral part of the human experience. You are not alone in your suffering.
- Now repeat the following phrases to yourself, softly and gently:
  - May I be safe.
  - May I be peaceful.
  - May I be kind to myself.
  - May I accept myself as I am.
- Or it it feels more appropriate, change the last phrase to:
  - May I accept my life as it is.
• Keep repeating the phrases, refreshing their emotional content by either getting in touch with the painful emotions in your body, or else feeling the gentle and comforting pressure or your hand on your heart.
• When you notice that your mind has wandered, return to the phrases, or to the experience of your emotions in your body, or to the feeling of your hand on your heart. And start again.
• If you are ever overwhelmed with emotion, you can always return to your breathing as a way of soothing and calming yourself. Then, when you’re comfortable, return to the phrases.
• Finally, take a few breaths and just be still for a few moments. If the feeling of compassion is arising for you, allow yourself to savor this sweet feeling. If few or no feelings of compassion are arising, this is the equally beautiful truth of the present moment. Allow yourself to savor your goodwill and intention to care for yourself. This is what matters most.
• When you’re ready, slowly resume your normal activities, knowing that you can return to the phrases anytime you wish.

Please respond to the following question:

What are two thoughts you had about this activity?

1.

2.
Appendix I

Mindfulness Activity

Mindfulness is being open, receptive, and non-judgmental to your experiences whether they are positive, negative, or neutral. Mindfulness also involves the ability to focus your attention on the present moment. When practicing mindfulness, you focus your attention on what is happening in the present moment rather than focusing on what happened in the past or what may happen in the future. The passage below is a mindfulness activity.

Please read the following passage and follow along with the provided instructions.

In mindfulness training, the Three Minute Breathing Space is taught as a practical, effective tool to manage stress, feel more centered - and, as we come out of Automatic Pilot, be more in control of our responses. The Breathing Space offers a way to reconnect with the present moment, and to your experience. It can be practiced anywhere, at any time, and doesn't need to be three minutes - this is just a guide.

Sit or stand with a tall spine. Close your eyes or keep a soft half gaze. Feel the body grounded. Begin to notice the nature of your current experience: begin to tune in with your bodily sensations, your thoughts and feelings.

Notice the texture of your experience without becoming drawn into it, or pushing it away. Become a quiet observer, just noticing.

Come gently back to this broad, soft awareness, whenever you notice you are becoming entangled with thoughts or worries.

After a minute or so, gently redirect your attention to your breath - to each in breath, and to each out breath. Again, just notice your breathing: its speed, texture, quality; and where you can feel the breath most alive in the body. Your breath is an anchor to bring you back to the present.

Keep coming back to the sensation of the breath, whenever you become aware of being distracted. Do this with kindness, without judgment.

Expand the field of your awareness around your breathing, so that you become aware of your whole body: your posture, breath, facial expression.

Gently broaden out this awareness to notice the nature of your whole experience. Hold everything in your awareness with equanimity.

Do this practice at any time in the day, or night, when you feel you could benefit from feeling more grounded and relaxed. Think of the Three Minute Breathing Space as a
habit; to form a tool to help your find more space in your thoughts and emotions, and perhaps a greater lightness of being

Please respond to the following question:

What are two thoughts you had about this activity?

1.

2.
Appendix J

Control Activity

Read the following passage.

Natural gas is a mixture of several hydrocarbon gases, containing seventy to ninety percent methane in most cases. Other common molecules include ethane, propane, butane, carbon dioxide, oxygen, nitrogen and hydrogen sulfide. Over millions of years, decayed plant and animal matter builds up in layers in the earth and becomes trapped by sand and silt that turns to rock. The organic matter, through a process of heat and pressure under this rock, then turns to coal, oil, or natural gas. Natural gas is considered ‘dry’ when it is almost purely methane, and ‘wet’ when there is a significant amount of other hydrocarbons.

The process for gas drilling begins with geologists locating the type of rock that will likely contain gas. Geologists then use seismic surveys (involving echoes and vibrations) to gain information about the rock. If the area seems like it will yield natural gas, drilling begins. Drilling can be performed on land (onshore) or in the ocean (offshore). Compared to onshore drilling, where there is ground on which to stabilize drilling machines, offshore drilling is much more complicated.

Historically for onshore drilling, the percussion method was used. This involved lowering a heavy metal drill bit into the earth over and over to create a hole. This method was largely abandoned, because it could not reach depths of more than 400 or 500 feet, on average. For offshore drilling, the wells are deep beneath the surface of the ocean, and artificial platforms are constructed on the surface. The first offshore rig was built and used in 1869, but it was not until 1974 that drilling was done far out in the ocean in deep water—namely, in the Gulf of Mexico. The original rigs, like the one patented by T. F. Rowland in 1869, were designed to work solely in very shallow water. The rigs that are used today have a similar four-legged design to the earliest models, but are able to drill in very deep water. Deep sea rigs have specific components that allow them to function efficiently. The two most important features are the subsea drilling template and blowout preventer. The subsea drilling template connects the drilling site to the platform at the surface of the water, and the blowout preventer is in place to prevent oil or gas from leaking into the water.

Today, there are two main types of deep sea rigs—movable and unmovable. Moveable rigs are able to move from location to location and drill in multiple places, while unmovable rigs remain in one place only. Moveable rigs are less expensive and are used many times for exploratory purposes. There are also various other types of rigs, including drill ships and drilling barges. Once natural gas is extracted from onshore and offshore sites, it is transported to consumers by way of pipelines. Before it reaches the pipelines, however, it needs to be purified into the state it will be in when it enters homes and businesses. This requires the separation of various hydrocarbons and fluids from the pure natural gas to produce ‘pipeline quality’ dry gas. Restrictions are placed on the quality of natural gas that is allowed to enter pipelines. Natural gas is also sometimes stored in large underground areas because demand is higher in different seasons of the year.
Please respond to the following question:

What are two thoughts you had about this passage?

1.

2.
Appendix K

Informed Consent Form

The Effects of Compassion on Emotions and Personality

Megan Stauffer, B.S. & Elizabeth Willits, B.A.

Introduction: This research study is sponsored by the Department of Psychology. The principal investigators, Megan Stauffer and Elizabeth Willits, are both current graduate students in the Master of Science programs for Clinical Psychology at USC Aiken. Dr. Anne Ellison is supervising their research.

Please read the information below that includes the purpose of the study, possible benefits, potential risks and discomforts, and your rights as a research participant. Please ask your investigator for clarification if you are unsure about anything described in this document. You may take as much time as you need to review this information and if you choose, discuss it with anyone you wish before deciding to participate. The decision to participate, or not participate, is up to you. If you decide to participate in this study, please sign and date at the end of this form where indicated.

Purpose of Study
You are invited to join a research study examining the effects of compassion on emotions and personality. The data obtained by your participation may help improve our understanding of the relationship between feelings of compassion on different emotional states and personality traits.

Eligibility to Participate
Approximately 75 students will participate in the current study. Participants must be able to clearly understand the research and be able to provide consent to participate before they can be enrolled. In order to give consent, you must be at least 18 years old.

Description of the Study Procedures: In the following study, you will be asked to complete a series of questionnaires describing your current emotions, how you generally view yourself, and how you behave/react in a variety of situations. You will also be asked to read several passages and to complete a brief writing activity after each exercise. The total estimated time commitment is 45 minutes to 1 hour.

Benefits of Participation: It is unlikely that you will personally benefit from participation in this study. However, your participation may help us understand the relationships between compassion, emotions, and personality. Additionally, some individuals may find the writing activity and questionnaires to be entertaining and self-informative.

Risks of Participation: Some people may experience distress due to the emotional nature of the reading passage in addition to exploring their emotions and self-concept while answering the questionnaires. If you do feel any discomfort during or after completing this study and would like someone to talk to, you may contact the Counseling Center on the University of South Carolina Aiken’s campus at (803) 641-3609 or stop by room 126 in the Business and Education Building.
**Participant Compensation:** For compensation of your time, you will receive course credit for your introductory psychology class. If you are not currently enrolled in psychology 101 you will receive an entry to win one of two $25 visa gift cards.

**Data Confidentiality and Participant Identification:** Any information that is obtained during this study and that could personally identify you will be kept as confidential as possible and will not be released or disclosed without your further consent. A unique code number that is not related to your personal information will be used to identify your information. Your responses will be kept in a locked cabinet in a departmental research lab and in password protected computer files. Only the research team will have access to these documents. The USC Office of Research Compliance may request access to this informed consent form to ensure procedures designed to protect research participants are being properly followed.

**Voluntary Participation:** Participation in this study is completely voluntary. You have the right not to participate at all or to leave the study at any time, even if you have already begun participation. Deciding not to participate or choosing to leave the study will not result in any penalty or loss of course credit to which you are entitled, and it will not harm your relationship with your professor or the University of South Carolina.

**Investigator Contact Information**

Students and faculty of the University of South Carolina are conducting this research. For further information about this study, you may contact:

- Elizabeth Willits, B.A.
  Email: ewillits@usca.edu
  Phone: (803) 641-8183
- Anne Ellison, Ed.D.
  Email: AnneE@usca.edu
- Megan Stauffer, B.S.
  Email: stauffem@usca.edu

If you have any questions regarding your rights as a research participant, contact:

- Thomas Coggins
  Office of Research Compliance
  University of South Carolina
  Columbia, SC 29208
  Phone: (803) 777-7095

**Participant Signatures**

I have read this informed consent form and have been given a chance to ask questions about this research. These questions have been answered to my satisfaction. I agree to participate in this study. I have received (or will receive) a copy of this form for my own records.

Participant _______________________________  Date ___/___/___

Investigator _______________________________  Date ___/___/___
Appendix L

Debriefing Statement

Thank you for your participation in this study. We greatly appreciate you taking time out of your busy schedule to devote your time to participate. There was some information that was not disclosed prior to your participation, because doing so may have interfered with your responses.

In this study, we were examining a construct called self-compassion. Self-compassion is a way of treating oneself kindly, while remaining in the present moment and feeling connected to others. We were interested in understanding how self-compassion impacts negative emotions, social-anxiety, self-esteem, emotion regulation, and personality traits. We were also interested in how a brief self-compassion activity would affect participants after reading a story designed to induce social anxiety.

You were lead to believe that the purpose of the study was to examine the effects of compassion on emotions and personality. However the purpose of this study is to examine self-compassion's impact on emotions and personality. Because we measured increased self-compassion through the brief activity, information about self-compassion was withheld so that we could examine the undisturbed effectiveness of the activity.

We hope that this information clarifies the purpose of the research as well as the reason we could not tell you all of the details prior to your participation. If you are interested in more information about self-compassion, you may be interested in the following resources:

It is very important that you do not discuss this study with anyone else until the study has been completes. Our efforts will be greatly compromised if other participants come into this study knowing what it is about and what constructs are being tested.

If you have any questions or concerns about the research study, please contact:

Elizabeth Willits, B.A.  
Email: ewillits@usca.edu

Anne Ellison, Ed.D.  
Phone: (803) 641-8183  
Email: annee@usca.edu

Megan Stauffer, B.S.  
Email: stauffem@usca.edu

Questions about your rights as a research subject are to be directed to:

Lisa Marie Johnson, IRB Manager  
Office of Research Compliance  
Univeristy of South Carolina  
1600 Hampton Street, Suite 414D  
Columbia, SC 29208

Phone: (803) 777-7095  
Email: Lisaj@mailbox.sc.edu

The office of Research Compliance is an administrative office that supports the University of South Carolina Institutional Review Board (USC IRB). The Institutional Review Board consists of representatives from a variety of scientific disciplines, non-scientists, and community members for the primary purpose of protecting the rights and welfare of human subjects enrolled in research studies.

Thank you for your participation!
References


