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The Effects of Self-Compassion and Shame on the Relationship Between Perfectionism and Depression

Julie Ann Barritt
University of Northern Colorado

UNIVERSITY OF NORTHERN COLORADO

Greeley, CO

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THE EFFECTS OF SELF-COMPASSION AND SHAME ON THE RELATIONSHIP BETWEEN PERFECTIONISM AND DEPRESSION

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Julie Ann Barritt

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Accepted by the Doctoral Committee

_____
Basilia Softas-Nall, Ph.D., Research Advisor

_____
Stephen Wright, Ph.D., Committee Member

_____
Heather Helm, Ph.D., Committee Member

_____
Thomas Dunn, Ph.D., Faculty Representative

Date of Dissertation Defense _____

Accepted by the Graduate School

_____
Linda L. Black, Ed.D.
Associate Provost and Dean
Graduate School and International Admissions

ABSTRACT

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The following study examined how self-compassion and shame effect the relationship between adaptive/maladaptive perfectionism and depression. Hierarchical multiple regression was used to examine the predictive role of adaptive/maladaptive perfectionism, shame, and self-compassion on depression. This study included a sample size of 226 undergraduate and graduate students from a university in the Rocky Mountain region. Results from the multiple regression analysis found maladaptive perfectionism was a significant predictor of depression (β = .540, p < .01), which supported findings from previous research. When shame and self-compassion were included, results indicated self-compassion (β = -.257, p < .01) and shame (β = .382, p < .01) were full mediators in the relationship between maladaptive perfectionism (β = .035, p = .707) and depression. The change in significance for maladaptive perfectionism from β = .540 to β = .035 was statistically significant (p < .01) showing important mediating effects of self-compassion and shame. Interestingly, adaptive perfectionism was found to act as a suppressor variable in this study; which provided important theoretical and methodological implications for future research. Overall, results emphasized the importance of targeting decreasing shame and increasing self-compassion for those with depression and maladaptive perfectionistic behaviors and beliefs.

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CHAPTER I

INTRODUCTION

Depression has increasingly gained more attention throughout the world due to its pervasive negative effects. In 2013, roughly 15.7 million adults, or 6.7% of the U.S. adult population, had at least one major depressive episode (National, n.d.). More importantly, according to the World Health Organization (WHO, 2015), depression is the leading cause of disability worldwide. The need for research to identify causal/protective factors and treatment indicators of depression has never been more imperative. Contributing to this body of research are studies identifying a positive correlation between depression and perfectionism (Cheng et al., 2015; Enns, Cox, & Clara, 2002; Macedo et al., 2015; Malinowski, Veselka, Atkinson, 2017), and shame (Andrews, Qian, & Valentine, 2002; Costa, Marôco, Gouveia, & Ferreira, 2016; Fontaine, Luyten, De Boeck, & Corveleyn, 2001; Stuewig & McCloskey, 2005; Tangney, Wagner, & Gramzow, 1992; Tran & Rimes, 2017). Similarly, studies have identified a negative correlation between self-compassion and depression (Arimitsu & Hofmann, 2015; Friis, Johnson, Cutfield, and Consedine, 2016; Neff, 2003b; Podina, Jucan, & David, 2015; Raes, 2010; Stephenson, Watson, Chen, & Morris, 2017; Wong & Mak, 2013), indicating self-compassion may be a possible protective factor or treatment indicator to help decrease symptoms of depression. In fact, recent literature has found self-compassion mediates the relationship between shame and depression (Castilho, Carvalho, Marques, & Pinto-Gouveia, 2017).

Only recently (Mehr & Adams, 2016) has maladaptive perfectionism and self-compassion been examined together in their relationship with depression, with findings showing self-compassion partially mediates the relationship between maladaptive perfectionism and depression. Yet, no study has examined the relationship between both forms of perfectionism (adaptive and maladaptive) and self-compassion; and until Mehr and Adam's (2016) study, prior research had examined the constructs of perfectionism (Cheng et al., 2015; Enns et al., 2002; Macedo et al., 2015) and self-compassion (Arimitsu & Hofmann, 2015; Neff, 2003b; Podina et al., 2015; Raes, 2010; Wong & Mak, 2013) separately in their role on symptoms of depression. There is a need to continue to examine these constructs together to determine if self-compassion could act as a protective factor against depression for individuals with perfectionism. Additionally, the relationship between adaptive perfectionism and self-compassion has yet to be thoroughly examined in previous research. A thorough review of previous literature has found significant relationships between perfectionism, shame, self-compassion, and depression.

Background

Over the past 30+ years, researchers have identified a positive correlation between maladaptive perfectionism and various forms of psychopathology; specifically: personality characteristics (Hewitt, Flett, & Turnbull, 1992; Hill, McIntire, & Bacharach, 1997), obsessive-compulsive disorder (e.g., Hewitt & Flett, 1991b; Rice & Pence, 2006), low self-esteem (Ashby & Rice, 2002; Rice, Ashby, & Slaney, 2007), shame (Ashby, Rice, & Martin, 2006), anxiety (Levinson et al., 2015; Rice & Slaney, 2002), type A behaviors (Flett, Hewitt, & Blankenstein, 1994), eating disorders (Reilly, Stey & Lapsley,

2016; Wang and Li, 2017) and depression (Cheng et al., 2015; Enns et al., 2002; Macedo et al., 2015; Malinowski et al., 2017; Tran & Rimes, 2017). Within the college student population, perfectionists have been found to have poorer academic adjustment and integration (Rice & Dellwo, 2001, 2002; Rice & Mirzadeh, 2000; Rice, Vergara, & Aldea, 2006), procrastination problems (Flett, Blankenstein, & Hewitt, 1992), academic burnout (Chang, Lee, Byeon, Seong, & Lee, 2016), hopelessness, poor social connectedness, and poor performance in honor students (Rice et al., 2006).

The implications of high perfectionistic beliefs and behaviors are widespread and can impede multiple domains of personal functioning. Yet, despite these clinically detrimental findings, a large part of the American culture, and other cultures around the world encourage perfectionism; in fact, it is associated with hard work, commitment, and reward in sports, business, science, and academics (Beiling, Israeli, & Antony, 2004). Academic, for children (Hewitt, et al., 2002) adolescents (Stoeber & Rambow, 2007) and college students (Grzegorek, Slaney, & Franze, 2004), appear to be a breeding ground for perfectionistic tendencies. In fact, it is estimated that two-thirds of college student samples can be classified as perfectionistic (Grzegorek et al., 2004) and honor students have shown to have even higher rates of perfectionistic beliefs and behaviors (Rice et al., 2006).

Studies have shown that the overall construct of perfectionism actually contains two higher order factors: adaptive and maladaptive perfectionism (Ashby, Slaney, Noble, Gnilka, & Rice et al., 2012; Frost, Heimberg, Holt, Mattia, & Naubauer, 1993; Hill, Huelsman, & Araujo, 2010; Hill et al., 2004; Hill et al., 1997; Slade & Owens, 1998). Adaptive perfectionism has been described as individuals who “strive for high standards,

yet retain the ability to feel accomplished and satisfied when those standards are met. They allow for minor mistakes in their work and are flexible in their pursuit for success" (Lo & Abbott, 2013, p. 97). Maladaptive perfectionism has been described as individuals who "set unrealistically high standards and allow relatively little margin for error. Those in the maladaptive perfectionism category are constantly concerned about disappointing others and hold the perception that they never seem to do things good enough (Lo & Abbott, 2013, pp, 97-98).

Adaptive and maladaptive perfectionism has shown to have different effects on mental health functioning. Adaptive perfectionism has been positively correlated with self-efficacy, self-esteem, life-satisfaction, internal locus of control, and positive well being (Ashby & Rice, 2002; Chen, et al., 2016; Ganske & Ashby, 2007; Grzegorek et al., 2004; LoCicero & Ashby, 2000; Periasamy & Ashby, 2002; Rice & Slaney, 2002; Suh, Gnilka, & Rice, 2017), and better emotional regulation (Richardson, Rice, & Devine, 2014). Maladaptive perfectionism has been positively correlated with low self-esteem (Ashby et al., 2006; Ashby & Rice, 2002; Chen et al., 2016; Rice et al., 2007), repetitive negative thinking (Macedo et al., 2015), rumination (Harris, Pepper & Maack, 2008; Hewitt, Flett, Besser, Sherry & McGee, 2003; O'Connor, O'Connor, & Marshall, 2007; van der Kaap-Deeder et al., 2016), hopelessness (Rice et al., 2006), poor emotional regulation and blunted cortical response to stress (Richardson et al., 2014), poor life satisfaction (Chen et al., 2016), and depression (Cheng et al., 2015; Enns et al., 2002; Hewitt & Flett, 1990; Macedo et al., 2015; Malinowski et al., 2017; Rice, Ashby, & Slaney, 1998; Shahar, Blatt & Zuroff, 2003; Sherry, Richards, Sherry & Stewart, 2014; Stuewig & McCloskey, 2005; Tran and Rimes, 2017; Wang, Slaney, & Rice, 2007).

Furthermore, maladaptive perfectionism has shown to increase feelings of shame (Fedewa, Burns & Gomez, 2005), and shame has been found to fully mediate the relationship between maladaptive perfectionism and depression (Ashby et al., 2006).

Tangney and Dearing (2002) describe shame as a deep, personal, painful emotion that has a lasting impact on the individual and their interpersonal relationships. Similar to maladaptive perfectionism, shame has been shown to cause significant clinical distress and has been linked to the following disorders and symptoms: depression, somatization, OCD, psychoticism, paranoid ideation, interpersonal sensitivity, anxiety, and phobic anxiety among others (Tangney & Dearing, 2002). Differing from shame, the positive effects of self-compassion have grown in interest amongst counseling psychologists and researchers.

Self-compassion has its origins rooted in Eastern philosophy and Buddhism (Neff 2003b). Self-compassion has been defined as "…being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness…[and] one's experience is seen as part of the larger human experience" (Neff, 2003b, p. 87). The benefits of self-compassion have gained more attention not only in research but also within therapeutic practice (Germer, 2015; Neff, 2015; Schwarts, 2015). Self-compassion is comprised of three main components: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. Overall, an individual is considered to have higher levels of self-compassion if they are able to have more self-kindness, identify with common humanity, and engage in mindfulness (Neff, 2003b).

Self-compassion enhances the self-to-self relationship; it includes the ability to be compassionate to ourselves in times of suffering instead of experiencing feelings of shame or disgust for our actions (Germer, 2015; Schwarts, 2015). Neff (2015) proposes that self-compassion is not just about being able to focus on the good through mindfulness and identifying with common humanity. Self-compassion includes the ability to identity the parts of ourselves that we dislike, are ashamed of, and/or want to hide from others, and embrace those parts of us with compassion and acceptance. Self-compassion does not mean that you develop self-pity; in fact, self-compassion is actually an antidote to self-pity because it is through self-compassion and self-acceptance of the good and bad that one is able to change. Similarly, developing self-compassion does not mean you are narcissistic, but instead allows us to identify with common humanity and therefore not feel we are above others (Neff, 2015). The ability to embrace all the parts of ourselves with compassion has been linked with several mental health benefits (e.g., Arimitsu & Hofmann, 2015; Neff, 2003a, 2004; Neff & McGehee, 2010).

Self-compassion has been found to have a negative correlation with depression and anxiety (Arimitsu & Hofmann, 2015; Friis et al., 2016; Neff, 2003b; Podina et al., 2015; Raes, 2010; Stephenson et al., 2017; Wong & Mak, 2013). Furthermore, self-compassion has been found to have a positive correlation to life satisfaction (Neff, 2003a); happiness, positive affect (Neff, Kirkpatrick, & Rude 2007); psychological well-being (Arimitsu & Hofmann, 2015; Neff, 2004; Neff & Germer, 2013); and social connectedness (Neff & McGehee, 2010). Due to the positive effects of self-compassion on mental health and well-being, it is reasonable to hypothesize self-compassion would be a protective factor against the development of depression. In fact, a study by Podina et

al. (2015) found that self-compassion, specifically the self-kindness aspect of self-compassion, plays an important role in the protection against depression; and a recent study by Mehr and Adams (2016), found self-compassion partially mediates the relationship between maladaptive perfectionism and depression.

In comparison to the extensive amount of research examining the effects of maladaptive perfectionism, limited studies have examined the implications of adaptive perfectionism. A specific gap in the literature is the relationship between maladaptive/adaptive perfectionism, shame, self-compassion, and depression. Prior research indicates the possible mediating effects of self-compassion and shame in the relationship between maladaptive perfectionism and depression (Castilho et al., 2017; Mehr & Adams, 2016); yet these constructs have not been examine as possible mediators between adaptive perfectionism and depression. It would be prudent to examine this relationship to help guide treatment of depression in individuals with different forms of perfectionism. Therefore, the purpose of this study was to address this gap in the literature and examine whether self-compassion and shame mediate the relationship between adaptive/maladaptive perfectionism and depression. Social mentality theory provided theoretical support for the design of this study and in the next section.

Theoretical Framework

Social mentality theory (Gilbert, 1989) was used to guide the design of this study and the interpretation of results. Social mentality theory helped explain how and why self-compassion and shame would mediate the relationship between perfectionism and depression, therefore supporting the use of multiple regression analysis to examine

possible mediation effects. Furthermore, social mentality theory was also be used to assist in the interpretation of results and identifying future research and treatment implications.

Social mentality theory focused on the evolutionary development of interpersonal and internal biological processes that have evolved through the need for survival. Vital to one's survival was the need for social belongingness and acceptance. Gilbert (2005) postulates that if one was unable to make social bonds, one did not survive. This aligns well with purpose of this study, as the motivating factor behind perfectionism is social acceptance by others and the self (Blatt, 1995). Similarly shame and self-compassion could be the mechanisms in which perfectionistic tendencies lead to either adaptive or maladaptive mental health functioning through their behavioral and emotional responses to social and intrapersonal relationships (Gilbert, 2005).

Social functioning can best be explained by five main archetypal *social mentalities* that influence our motivations, thoughts, emotions, and behaviors; these are: care eliciting, caregiving, formation of alliances, social ranking, and sexuality. Specifically, the social ranking mentality may help support the proposed relationship between different forms of perfectionism, shame, self-compassion, and depression in addition to assisting in the interpretation of results. Social ranking mentality involves the formation of relationships for the purpose of obtaining and maintaining social rank, and the competition of resources. Based on this hypothesis of one's need to obtain and maintain social rank, it is reasonable to suggest that perfectionists could have developed a belief that in order to gain acceptance, one has to be perfect. If one fails to obtain social approval, feelings of shame and subsequent depression could occur (Gilbert, 2005). Gilbert (2005) suggests social approval is the largest and most influential motivating

force behind human behavior. People strive for acceptance, approval, and belonging from those in their family and society, which includes the desire to avoid rejection, isolation, and shame (Wolfe, Lennox, & Cutler, 1986). Shame has a unique role in social rank mentality, as shame is a direct reflection of our view of social rank and acceptance. Self-critical individuals have lower self-compassion (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006) and often experience feelings of inferiority that can lead to symptoms of anxiety (Gilbert, 2001) and depression (Gilbert, 1992, 2000b; Gilbert et al., 2006).

Similarly, self-compassion could act as a protective factor against depression for perfectionists because it allows one to feel a secure attachment to others and that they are good enough for social acceptance (Neff, 2003b). Johnson (2011) suggests feelings of security and a secure attachment have positive benefits to both interpersonal and intrapersonal functioning. Specifically, secure attachment allows one to maintain emotional balance, identify needs through emotional awareness, better accommodate their own needs and the needs of others, and effectively cope with negative feelings. Self-compassion may help foster a secure attachment to others through its components of self-acceptance and self-kindness. Furthermore, self-compassion is linked to the self-soothing system, which is connected to the oxytocin-opiate system. The self-soothing system is connected to feelings of security and happiness and informs the individual when they have a secure hold on their social rank. The self-soothing system encompasses mindfulness and self-acceptance, two characteristics of self-compassion (Neff, 2003b). Therefore, one can reasonably conclude that the self-soothing system would be activated in individuals who practice self-compassion. A more thorough review of social mentality theory is discussed in Chapter II.

Rationale and Need of Study

The World Health Organization reported that depression is the leading cause of disability worldwide (WHO, 2015). Similarly, the average cost to employers due to days missed because of depression was between $17 and $44 billion dollars each year (WHO, 2013). The need for further research examining contributing factors to depression to help establish treatment recommendations has never been more imperative. One of those factors that have been shown to significantly contribute to depression is perfectionism (Cheng et al., 2015; Enns et al., 2002; Macedo et al., 2015; Stuewig & McCloskey, 2005).

Maladaptive perfectionism has been found to have a strong positive correlation with shame (Ashby et al., 2006), depression (Cheng et al., 2015; Enns et al., 2002; Macedo et al., 2015; Malinowski et al., 2017; Stuewig & McCloskey, 2005; Tran & Rimes, 2017), and suicide (Blatt, 1995); while shame has been found to have a positive relationship with depression (Matos, Pinto-Gouveia, & Duarte, 2013; Stuewig & McCloskey, 2005). Social mentality theory implies that shame activates the threat system due to fear of social rejection and feelings of isolation and rejection (Gilbert, 1995); feelings also commonly experienced in maladaptive perfectionists. Therefore supporting the need to research possible mediating effects of shame on depression.

Adaptive perfectionism has been shown to be positively correlated to increased proneness of depression, but studies have failed to find a direct correlation between adaptive perfectionism and depression (Macedo et al., 2015). Since adaptive perfectionism has been linked to increased proneness for depression but not the actual onset of depressive symptoms, it is reasonable to imply adaptive perfectionism may

increase the risk of depression, but is not directly linked to its onset. A major distinction between adaptive perfectionism and maladaptive perfectionism is the ability to be satisfied with one's ability and performance. A level of self-kindness occurs in adaptive perfectionism, which is a major component to self-compassion. Self-compassion has been found to "buffer" between the effects of maladaptive beliefs and the onset of depression (Podina et al., 2015). Therefore, it is reasonable to hypothesize that self-compassion could mediate the relationship between adaptive perfectionism and depression and could explain why adaptive perfectionism is not directly correlated with depression. Social mentality theory would suggest that self-compassion activates the self-soothing system, which is connected to the oxytocin-opiate system and triggers feelings of calmness and security. Furthermore, feelings of social connectedness could protect against the onset of depression.

The level of shame, depression, and suicide associated with perfectionism is alarming and raises a significant concern for college campuses (Grzegorek et al., 2004). It is becoming more and more essential that counseling psychologists find interventions to help decrease depression, shame, and suicide, especially in college students who struggle with perfectionism. One such intervention could possibly be found in self-compassion. Self-compassion has shown a consistent negative correlation with depression, thereby being a promising protective factor (Krieger, Altenstein, Baettig, Doerig, & Holtforth, 2013).

Researchers may be overlooking important constructs and subsequent treatment implications for depression by not examining the role of self-compassion and shame in the relationship between both forms of perfectionism and depression. The findings of this

study could help counseling psychologists and other mental health professionals by providing further clarification on whether adaptive and maladaptive perfectionism, shame, and self-compassion explain a significant amount of variance in depression. These findings could also help counseling psychologists have a better understanding of the link between the different forms of perfectionism and depression. Further understanding of this relationship could help identify potential preventative/protective factors that could help lower the prevalence of depression amongst individuals with different forms of perfectionism. With high prevalence rates of depression and suicide among college students (Grzegorek et al., 2004), any research about factors that contribute to depression and subsequent treatment recommendations are highly needed. Based on the results of this study, treatment recommendations that focus on decreasing feelings of shame and increasing self-compassion in individuals with perfectionism that suffer from depression could be made.

Purpose of Study

Perfectionism is an important construct to the American culture and others around the world as it is commonly supported and rewarded in sports, business, and academics (Beiling et al., 2004). While adaptive perfectionism can have positive benefits to personal functioning, maladaptive perfectionism can have vast negative implications on mental health. Studies have guided researchers to examine how various constructs impact the relationship between perfectionism and depression; of particular interest to this study, is the role of shame and self-compassion. Shame and self-compassion provide significant treatment indicators for people struggling with depression, and if found to have a significant role in the relationship between perfectionism and depression can help guide

mental health clinicians in their treatment of perfectionists struggling with depression. Therefore, the purpose of this study was to examine whether shame and self-compassion mediate the relationship between maladaptive and adaptive perfectionism and depression. The findings from this study could help further counseling psychologists' understanding of the relationship between the different forms perfectionism and depression, in addition to providing treatment implications that could target the effects of shame and self-compassion. The following research questions were answered through the use of multiple regression analyses.

Research Questions

Q1 Do the different forms of perfectionism (i.e., adaptive & maladaptive) help explain a significant amount of variance in depression?

Q2 Does self-compassion and shame explain a significant amount of variance in depression?

Q3 Does maladaptive/adaptive perfectionism interact with self-compassion and shame to predict depression?

Definition of Terms

Adaptive Perfectionism. A factor of perfectionism that includes the setting, and striving to obtain, high personal goals and expectations, and being able to feel satisfied with one's performance (Blatt, 1995). In this study, adaptive perfectionism was measured by the Conscientious Perfectionism Scale, which is comprised of the High Standards for Others, Organization, Planfulness, and Striving for Excellence subscales of the Perfectionism Inventory (Hill et al., 2004; Hill et al., 2010).

Maladaptive Perfectionism. Defined as a factor of perfectionism that includes the setting, and striving to obtain, high personal goals and expectations with the belief that their accomplishment is the only way to obtain the approval of others. It includes the

inability to be satisfied with one's performance even when it excels the expectations of others (Blatt, 1995). In this study, maladaptive perfectionism was measured by the Self-Evaluative Perfectionism Scale, which is comprised of the Concern over Mistakes, Need for Approval, Perceived Parental Pressure, and Rumination subscales of the Perfectionism Inventory (Hill et al., 2004; Hill et al., 2010).

Depression. Defined as a set of symptoms that may include: feelings of sadness, pessimism, loss of pleasure and interest, feelings of guilt, agitation, worthlessness, loss of energy, irritability, change in sleep and appetite, difficulty concentrating, feelings of hopelessness and/or helplessness, and preoccupation with death or dying (Beck, Steer, & Brown, 1996). In this study, depression was measured by the Patient Health Questionnaire – 9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001).

Perfectionism. Defined as a complex phenomenon that includes the setting and drive to meet high standards that can be set by the individual or society and can contribute to adaptive or maladaptive functioning (Blatt, 1995).

Self-Compassion. Defined as the ability to be kind towards oneself in times of self-judgment or suffering. It includes the ability to identify with common humanity and understand it is part of the human experience to make mistakes. Lastly, it involves being mindful of one's mistakes and not over-identifying with them. It includes three dimensions: self-kindness versus self-judgment; mindfulness versus over-identification; and common humanity versus isolation (Neff, 2003b). In this study, self-compassion was measured by the Self-Compassion Scale – Short Form (SCS-SF; Raes, Pommier, Neff, & van Gucht, 2011).

Shame. Defined as a deep, personal, negative, self-conscious emotion, that is directly linked to one's self-identity. It is part of an internal self-blaming process that leads to feelings of worthlessness, powerlessness, disgust, inferiority, self-consciousness, and feeling small and exposed (Kim, Thibodeau, & Jorgensen, 2011; Tangney et al., 1992; Tangney, Miller, Flicker, & Barlow, 1996). In this study, shame was measured by the Experience of Shame Scale (ESS; Andrews et al., 2002).

Social Mentality Theory. Defined as a theory that encompasses aspects of evolutionary biology, neurobiology, and attachment theory to explain affective, behavioral, and neurological responses to situations that elicit threat or safeness in *intra* and *inter*-personal functioning (Gilbert, 1989).

Standards. Defined in relation to perfectionism as, "preferences for personal competence, expectations for strong personal performance, [and] high personal goals for oneself" (Rice & Lopez, 2004, p. 118).

Limitations

The proposed study was considered to be a non-experimental correlational research design (Remler & Van Ryzin, 2010). As such, there are certain limitations that should be discussed. First and foremost, results gained from this study are limited in their generalizability due to the use of convenience sampling (Remler & Van Ryzin, 2010). Participants were recruited from a university in the Rocky Mountain region and therefore are not representative of the entire population. Second, data were gathered using self-report measures. An inherent limitation of survey method research is the effect of desirability and wanting to appear better than they are. This limits the validity of results as they may be skewed due increase social desirability (Remler & Van Ryzin, 2010).

Third, since this study was administered in a web-based format via Qualtrics (2015), the sample gathered in this study most likely suffered from volunteer bias. Remler and Van Ryzin (2010) describe volunteer bias as participants that respond and participate in a study based on interest; it is commonly observed in survey research, and further limits the generalizability of results. Last, survey research also suffers from a high drop out rate of participants who start the survey but fail to complete it. The length of the survey impacts this rate as the longer the time it takes to complete the more likely participants are to dropping out of the study. To help increase full participation and gather more participants than only those who are interested, participants were informed that by participating in the study, they were entered into a drawing to win one of three $50.00 gift cards to Amazon. Furthermore the limitations are discussed further in future research and treatment implications in Chapter V.

Summary

Adaptive and maladaptive perfectionism has been shown to have a vast array of emotional and behavioral effects (e.g. Cheng et al., 2015; Enns et al., 2002; Macedo et al., 2015; Stuewig & McCloskey, 2005). Similarly, shame and self-compassion has shown to have significant effects on mental health and could indicate future treatment recommendations for perfectionists. Social mentality theory (Gilbert, 1989, 2005) proposes a connection between perfectionism and depression through the effects of self-compassion and shame. In order to test this hypothesis, multiple regression analyses were conducted to help identify any mediating effects of self-compassion and shame. The purpose of this study was to fill a gap in literature by further clarifying important factors

that enhance or protect against depression in perfectionists. Last, definition of terms and limitations of the study were discussed.

CHAPTER II

LITERATURE REVIEW

This chapter reviews the theory guiding this study and the literature of the four constructs being examined: Perfectionism, self-compassion, shame, and depression. A review of social mentality theory is discussed followed by each construct and their relationship with depression. Last, a review on how these constructs interact and affect each other amongst college students is discussed.

Theory

Social mentality theory (Gilbert, 1989, 2005) provided conceptual support to the research questions of this study, specifically, if self-compassion and shame act as mediators between different forms of perfectionism (i.e., adaptive & maladaptive) and shame. Social mentality theory suggests that many social behaviors, drives, and roles have evolved over millions of years. The ability of human beings to recognize and respond to various social roles is driven by both biological responses and complex cognitive processes. The motivation behind various social roles are labeled as social mentalities, which are "organizing systems that choreograph motive, emotions, thoughts, and behaviors…" (Gilbert, 2005, p 325). The five social mentalities are: care eliciting (finding relationship that can provide intimacy and protection); caregiving (forming relationships that involve providing time and energy to ensure future survival); formation of alliances (forming relationships of cooperation, friendship, and group living); social

ranking (forming relationships for competition of social rank and receiving resources); and sexuality (forming relationship for sexual behaviors that includes attraction and courting behaviors). For the purpose of this study, the rest of the review on social mentality theory focuses on the social ranking mentality because it addresses the mechanisms in which perfectionism, shame, and self-compassion contribute to intrapersonal and interpersonal functioning and their relationship to depression.

As previously stated, social ranking involves the formation of relationships for the sole purpose of social ranking and competition for resources. It resolves internal social conflict that would be counterproductive for group survival (Gilbert, 2005). Also inherent in this mentality, is the need to maintain one's social rank, which includes the imperative need for approval. In fact,

> …by far the largest motivation underpinning human social competition is the desire for approval, to win a favored place in the minds of others, to stimulate positive emotions about us in the minds of others. Thus, we compete so that our parents will love us, our friends want us as allies, our bosses admire and support our talents, [and] our sexual partners desire us… (Gilbert, 2005, p. 318)

People compete for acceptance and belonging in order to avoid rejection, isolation and shame (Wolfe et al., 1986). Shame in particular is part of our social rank mentality because it is a self-conscious emotion that directly reflects our beliefs about our social acceptance, social standing, attractiveness, and reputation (Gilbert, 2002).

Shame develops within our social ranking mentality based on our early experiences and messages received in early childhood. "Thus, if a child is constantly labeled as stupid and inadequate, this may be copied into both implicit (fear of others) and explicit self-referent systems. These can then act as sources of information how others are likely to treat [them]" (Gilbert, 2005, p. 324). Greenberg (2004) clarifies that

the cycle of shame occurs through the development and activation of schemas. Specifically, individuals who feel rejected and are told that they are inadequate develop schemas that are associated with feelings of rejection and shame. Throughout an individual's life, schemas continue to be reactivated during times of social interaction and similar feelings of shame can be activated as they engage in a critical self-evaluative process. Self-critical people attack themselves and hold contemptuous views of the self. They can feel harassed by their own thoughts, which can include "you must try harder, you lazy person" (Gilbert, 2005, p. 324). The internal evaluation process described by Gilbert (2005) is descriptively similar to the highly critical self-evaluative process perfectionists exhibit (Slade & Owens, 1998; Blatt, 1995). Furthermore, not only do maladaptive perfectionists have the same attacking and contemptuous view of the self, they also often experience high levels of shame (Ashby et al., 2006; Fedewa et al., 2005).

Similar to the development of shame as described above by Gilbert (2005), perfectionism is also theorized to develop through parenting style that includes unrealistic high expectations and inconsistent affection based on performance (Hamachek, 1978; Rice, Lopez & Vergara, 2005). Based in social mentality theory, it appears both perfectionism and shame both develop as part of parenting and are subsequently maintained by a highly critical self-evaluation process (Blatt, 1995; Gilbert, 2005; Slade & Owens, 1998) in order to win the approval of others (Gilbert, 2005). Prior studies have further examined the relationship between perfectionism and shame, and found that shame is often a result of maladaptive perfectionism (Ashby et al., 2006; Fedewa et al., 2005). Furthermore, based on social mentality theory, self-criticism (a process often found in maladaptive perfectionists) activates the threat system due to feelings of shame,

lack of perceived social acceptation, and fear of social rejection (Rice & Mirzadeh, 2000). These individuals have extreme difficulty finding self-compassion (Gilbert et al., 2006) and their feelings of social rejection, and inferiority can lead to symptoms of anxiety (Gilbert, 2005) and depression (Cheung, Gilbert, & Irons, 2004; Gilbert, 1992, 2000b). The relationship between perfectionism and depression has been strongly established (e.g., Cheng et al., 2015; Enns et al., 2002; Macedo et al., 2015); social mentality theory proposes perfectionism leads to depression through feelings of shame and subsequent behaviors of isolation, anger, and feelings of social rejection (Gilbert, 2005). The lack of compassion for the self is often seen as the focus of psychotherapy for self-critical and individuals with perfectionism (Gilbert, 2000a; Gilbert & Irons, 2005).

Social mentality theory hypothesizes that compassion can have a reorganizing effect on psychological functioning, relationships, and social values (Gilbert & Procter, 2006). Self-compassion improves overall well-being through feelings of social security and belongingness (Gilbert & Irons, 2005). Johnson (2011) suggests feelings of security and a secure attachment have positive benefits to both interpersonal and intrapersonal functioning. Specifically, secure attachment allows one to maintain emotional balance, identify needs through emotional awareness, better accommodate their own needs and the needs of others, and effectively cope with negative feelings. Self-compassion may help foster a secure attachment to others through its components of self-acceptance and self-kindness.

Gilbert (2005) suggests compassion develops as an important process that promotes the ability to care for others and therefore increase survival. Furthermore, it is hypothesized that self-compassion arises from one’s compassion abilities, and in so doing

increases our relationship to the self (Gilbert & Procter, 2006). Self-compassion is comprised of self-acceptance and mindfulness (Neff, 2003b), which are considered self-soothing strategies. The self-soothing system in the brain (i.e., oxytocin-opiate system) is often activated by social security and associated with feelings of safeness and acceptance (Gilbert, 1989). Biologically, this system allows us to monitor our social connection. Therefore, one can reasonably conclude that the self-soothing system would be activated in individuals who practice self-compassion as it allows one to be happy with their own abilities, identity, and inadequacies, and have reduced attachment anxiety (Wei, Liao, Ku, & Shaffer, 2011). Social mentality theory helps support the research question of this study in that it explains how self-compassion could act as a protective factor against depression in individuals with maladaptive perfectionism through self-acceptance, feelings of happiness, and feeling good enough for social belongingness.

Perfectionism

Perfectionism and its effects on mental health have been researched since the 1970's. In fact, according to O'Connor (2007), "since the 1980's there has been a 300% increase in the number of published papers on perfectionism" (p. 698). A thorough review of current and past research was discussed for the purposes of this study. Overall, perfectionism is often encouraged and tolerated in the United States (U.S.) and cultures around the world. People who are able to meet high standards are often rewarded; this is apparent in business (promotions, pay raises, etc.), academics (graduation, grades, GPA, awards, etc), and sports (trophies, pay raises, etc.), among other domains (Beiling et al., 2004). While striving to improve one's performance can be adaptive and often leads to success and accomplishments, it can also lead to a perceived need to be *perfect* to be

successful and accepted. Striving for perfection can bring certain rewards through academics and career; it can also have negative effects on performance, mental health, and well-being (Macedo et al., 2015).

Perfectionism has been found to be a stable construct related to personality (Ashby et al., 2012; Cheng et al., 2015; Rice et al., 2007). Participants of the Ashby et al. (2012) study even identified that they felt unable to give up their perfectionistic beliefs and behaviors because it was so "ingrained or such a basic part of their personality…" (p. 332). One of the original theorists and researchers of perfectionism found perfectionists are more likely to have an ingrained, highly sensitive, and critical self-evaluative process (Pacht, 1984). Furthermore, individuals with perfectionism often strive to avoid mistakes and are acutely aware of personal stressors; which individuals with maladaptive perfectionism are quick to judge as catastrophic failures, while individuals with adaptive perfectionism are able to be more accepting of their mistakes (Hewitt & Flett, 1993). Prior to discussing in greater detail the effects of perfectionism, it is important to understand the etiology of perfectionism and its various forms.

Factors of Perfectionism and Development

While there is no consensus on a specific definition of perfectionism (Rice, Richardson, & Ray, 2016), Blatt (1995) conducted a comprehensive review of perfectionism and describes it as "a complex phenomenon that is linked with normal adaptive functioning as well as with psychological disturbance," (p. 1006). Hamachek (1978) was the first to identify that perfectionism is a multidimensional construct with both adaptive and maladaptive components. Since then, various studies have supported a two-factor model of perfectionism commonly labeled as adaptive and maladaptive

perfectionism (Ashby et al., 2012; Hill et al., 1997; Slade & Owens, 1998; Stumpf & Parker, 2000). Other researchers have also labeled this construct as perfectionistic striving (adaptive) and perfectionistic concerns (maladaptive) (Stoeber & Otto, 2006); positive striving (adaptive) and maladaptive evaluative concerns (Frost et al., 1993); and conscientious (adaptive) and self-evaluative (maladaptive) perfectionism (Hill et al., 2004). The majority of literature thus far has focused on the effects of maladaptive perfectionism on mental health. While not completely lacking in research, the effects of adaptive perfectionism often appears to be overlooked in research; which is counterintuitive to the focus of positive psychology often observed within counseling psychology (Rice et al., 1998). In order to address the lack of comprehensive research on the overall construct of perfectionism, and specifically the effects and implications of adaptive perfectionism, this study reviewed and examined both factors. A review of each factor of perfectionism begins with their definition, description, and effects on mental health, followed by a review of how it develops through parenting styles.

Adaptive perfectionism. Lo and Abbott (2013) conducted a thorough review of perfectionistic literature and based on Hamachek's (1978) original work, described adaptive (or normal) perfectionists, as "those who strive for high standards, yet retain the ability to feel accomplished and satisfied when those standards are met. They allow for minor mistakes in their work and are flexible in their pursuit for success" (Lo & Abbott, 2013, p. 97). Adaptive perfectionism includes the setting of practical and attainable high standards and feelings of success in both current and future endeavors (Slade & Owens, 1998). A likely contributing process that helps distinguish between adaptive and maladaptive perfectionism, is the subsequent evaluation process individuals engage in

after a performance. Unlike maladaptive perfectionists, adaptive perfectionists may not have an excessively self-critical evaluation process, and therefore do not ruminate about their performance (Beiling et al., 2004). The lack of excessive and critical self-evaluation could also explain why adaptive perfectionism often report higher scores of self-efficacy, self-esteem, life satisfaction, high internal locus of control, and positive well being (Ashby & Rice, 2002; Chen, et al., 2016; Ganske & Ashby, 2007; Grzegorek et al., 2004; LoCicero & Ashby, 2000; Periasamy & Ashby, 2002; Rice & Slaney, 2002; Suh et al., 2017); lower levels of depression and anxiety (Macedo et al., 2015; Mathew, Dunning, Coats, & Whelan, 2014); lower levels of shame (Fedewa et al., 2005; Pirbaglou et al., 2013) and better emotional regulation than maladaptive perfectionists (Richardson et al., 2014). Similarly, individuals that have adaptive levels of perfectionism have more motivation to meet high standards (Chang et al., 2016; Mistler, 2010), have higher levels of hope (Mathew et al., 2014), and are able to satisfactorily meet their own expectations (Enns, Cox, Sareen, & Freeman, 2001).

It is clear that adaptive perfectionism is related to positive mental health, adjustment, and well-being. As previously stated, adaptive perfectionists have shown to report lower levels of anxiety and depression (Macedo et al., 2015; Mathew et al., 2014). Yet, other studies have found contradictory findings, with a few showing no relationship between adaptive perfectionism and depression (Beiling et al., 2004; Rice et al., 1998) and another finding a positive correlation between adaptive perfectionism and depression proneness (Enns et al., 2002). These findings appear to imply that adaptive perfectionism may increase the proneness to depression, but it does not seem to have a direct relationship with the onset of depression. Based on these findings, it is reasonable to

question whether other factor(s), such as self-compassion, could contribute to the prevention of depression in individuals who can be described as adaptive perfectionists. Interestingly, a few studies have already found support for the role of mediators between adaptive perfectionism and depression. Specifically, optimism (Black & Reynolds, 2013) and hope (Mathew et al., 2014) mediated the relationship between adaptive perfectionism and depression. A major distinguishing feature between adaptive and maladaptive perfectionism, is the ability to accept one's faults (Rice & Dellwo, 2002), which is also a characteristic of self-compassion. Therefore it is reasonable to imply that self-compassion may also act as a mediator between adaptive perfectionism and depression. The positive implications of adaptive perfectionism have been moderately studied thus far in research. In order to further future research and understanding of adaptive perfectionism, it is important to understand how it develops.

Similar to other aspects of personality development, early studies have linked the development of perfectionism to parenting style and early experiences (Hamachek, 1978; Rice & Dellwo, 2002; Rice et al., 2005; Rice & Mirzadeh, 2000; Sorotzkin, 1998). One of the first to theorize about the development of perfectionism, Hamachek (1978) suggested that adaptive perfectionism could develop as a result of disorganized parenting, and being flexible to the adherence of high standards. Children raised in a disorganized system may develop adaptive perfectionist beliefs as a result of wanting to impose organization and order in their otherwise chaotic system. Furthering Hamacheck's ideas, Sorotzkin (1998) claimed that parents of adaptive perfectionists are consistently supportive, encouraging, and positive of their child's endeavors and accomplishments. Rice and Mirzadeh (2000) found people who could be described as adaptive

perfectionists had a more secure attachment with their parents. In fact, adaptive perfectionists exhibited organization, high standards and expectations, had fewer doubts of their ability, and did not experience high criticism from parents (Rice & Dellwo, 2002). Furthermore, adaptive perfectionists were more likely to describe their parents as less critical of their performance while still maintaining high standards (Rice et al., 2005).

Maladaptive perfectionism. Lo and Abbott (2013), based on Hamachek's (1978) original work, describe maladaptive (or neurotic) perfectionists as "those who set unrealistically high standards and allow relatively little margin for error. They are constantly concerned about disappointing others and hold the perception that they never seem to do things good enough" (Lo & Abbott, 2013, p. 97-98). Maladaptive perfectionists set unrealistic and unattainable standards and are never content with their performance, even when praised by others (Enns et al., 2002). Inherent within maladaptive perfectionism is a critical self-evaluation process that leads to dissatisfaction with one's abilities and discrepancy between one's standards and performance (Stoeber, Chesterman, & Tarn, 2010). Their highly critical self-evaluative process leads to feelings of vulnerability and inferiority and puts the individual in a cycle of striving for perfection while never being satisfied with one's performance (Blatt, 1995; Slade & Owens, 1998). Maladaptive perfectionists also report higher levels of stress, poor emotional regulation, and have a blunted cortical stress response due to theorized chronic exposure to stress (Richardson et al., 2014). Furthermore, due to unrealistic high standards and the need to avoid mistakes, researchers have suggested that maladaptive perfectionism can contribute to chronic procrastination, shame, indecisiveness, and fear of failure (Onwuegbuzie, 2004). Similarly, maladaptive perfectionists tend to experience consistent negative

feelings about their performance, have lower self-esteem, and perceive their work as of lower quality than their peers (Ashby & Kottman, 1996; Frost et al., 1993; LoCicero & Ashby, 2000; Rice et al., 1998; Rice & Slaney, 2002).

Research has consistently found maladaptive perfectionism to be correlated with psychopathology and psychological distress (e.g., Blatt, 1995; Cheng et al., 2015; Enns, et al., 2002; Macedo et al., 2015). Specifically, it has been connected to: low self-esteem (Ashby et al., 2006; Ashby & Rice, 2002; Chen et al., 2016; Rice et al., 2007), insomnia (Vincent & Walker, 2000) obsessive-compulsive disorder (Hewitt & Flett, 1991b; Rice & Pence, 2006), repetitive negative thinking (Macedo et al., 2015), eating disorder behaviors (Reilly et al., 2016; Wang & Li, 2017), rumination (Harris et al., 2008; Hewitt et al., 2003; O'Connor et al., 2007; van der Kaap-Deeder et al., 2016), hopelessness (Rice et al., 2006), and substance abuse (Blatt, 1995; Rice et al., 1998). Of particular importance to the purpose of this study, maladaptive perfectionism has been linked to increase levels of shame (Ashby et al., 2006; Fedewa et al., 2005; Malinowski et al., 2017) depression (Cheng et al., 2015; Enns et al., 2002; Hewitt & Flett, 1990; Macedo et al., 2015; Malinowski et al., 2017; Rice et al., 1998; Shahar et al., 2003; Sherry et al., 2014; Stuewig & McCloskey, 2005; Tran & Rimes, 2017; Wang et al., 2007), and poor academic adjustment and performance (Onwuegbuzie, 2004; Rice & Dellwo, 2001, 2002; Rice & Mirzadeh, 2000; Rice et al., 2006).

As previously stated, the relationship between maladaptive perfectionism and depression has been well studied and results have consistently found a positive correlation between the two constructs. Interestingly, similar to adaptive perfectionism, studies have found rumination (Harris et al., 2008) and optimism (Black & Reynolds,

2013) mediated the relationship between maladaptive perfectionism and depression. Therefore, while researchers have thoroughly examined the direct of effect of maladaptive perfectionism on depression, results of resent studies indicate future research should start examining possible mediators that could help further explain and clarify the relationship between maladaptive perfectionism and depression. Of importance to this study, shame and self-compassion have shown to have a significant correlation with depression and therefore were examined as possible mediators.

Even more alarming is the correlation between maladaptive perfectionism and suicide (Baumeister, 1990; Blatt, 1995; Hewitt & Flett, 1991a; Hewitt, Flett, & Weber, 1994; Johnson, Wood, Gooding, Taylor, & Tarrier, 2011). In fact, Flett, Hewitt, and Heisel (2014) contend that the impact of perfectionism in suicide is greater than expected, and should be examined more thoroughly. Even more concerning is perfectionism could actually impede treatment goals of decreasing suicidal ideation (Jacobs et al., 2009). Maladaptive perfectionism accounts for unique variance in suicide above and beyond what is accounted for by depression and hopelessness (Hewitt, Flett, & Turnbull-Donovan, 1992); specifically, it accounted for 18% to 35% of the variance in suicide risk variables (Blankstein, Lumley, & Crawford, 2007). Maladaptive perfectionism has been found to impact suicidal ideation through socially prescribed perfectionism (Baumeister, 1990; Hewitt et al., 1994; O'Connor, 2007), self-criticism, concern about mistakes, (Hewitt et al., 1994; O'Connor, 2007) and doubts about being able to improve (O'Connor, 2007). Maladaptive perfectionism is theorized to be the result of several contributing factors during development and upbringing.

Previous literature on how maladaptive perfectionism develops is vast and diverse. Originally, Hamachek (1978) suggested maladaptive or neurotic perfectionism develops as a result of inconsistent or nonexistent approval from parents who show affection based on the child's performance. According to Blatt (1995), children of parents with high levels of perfectionism learn through fear of losing the love and approval from their parents that they must meet the "stern and harshly expressed parental expectations," for acceptance (p. 1012). Similarly, Sorotzkin (1998) indicated parents with high levels of perfectionism struggle to have empathy for their child's experience. In fact, a study that found maladaptive perfectionism was positively correlated with high levels of criticism from parents, and a belief that acceptance, love, and support were dependent on their ability to achieve success and be perfect (Rice et al., 2005). Consistent through previous literature on the development of maladaptive perfectionism is the presence of both perfectionistic parenting (high expectations and standards) and harsh parenting (stern, critical, and controlling behavior) (Blatt, 1995; Hamachek, 1978; Rice et al., 2005; Sorotzkin, 1998).

Theories of How Perfectionism is Reinforced and Maintained

Two models help explain how the two factors of perfectionism remain as part of ones functioning: the dual process model of perfectionism developed by Slade & Owens (1998), and the cognitive behavioral model of clinical perfectionism proposed by Shafran, Cooper, Fairb urn (2002). The dual process model (Slade & Owens, 1998) states that adaptive perfectionism is maintained through positive reinforcement. Specifically, the ability of adaptive perfectionists to be satisfied with their achievements allows them accept subsequent successes and associate those successes as a result of their ability,

which contributes to their drive to continue meeting high standards. Similarly, Slade and Owens (1998) postulate that maladaptive perfectionists strive for perfectionism in order to avoid negative consequences of disapproval and failure. Maladaptive perfectionism is maintained by the desire to avoid failure; and when they continuously perceive their attempts and achievements as inadequate of their unreasonable high standards they continue to strive for perfectionism in order to avoid the sense of failure.

Shafran et al. (2002) proposed a model that specifically addressed how maladaptive perfectionism is maintained within the individual. The cognitive behavioral model of clinical perfectionism suggests that unrealistic high standards lead to insecurity of one's ability to reach such standards and increased fear of disappointment. Their evaluation process becomes increasingly self-critical due to heightened anxiety of failure, which ironically contributes to nothing being good enough, dichotomous thinking, procrastination and overgeneralization. Their self-critical evaluation process also interprets achievements and abilities as never being good enough, even when they are told otherwise. Evident within Shafran et al.'s (2002) model is the pervasiveness of irrational automatic thoughts and beliefs. The two models proposed by Slade and Owens (1998) and Shafran et al. (2002) help explain how perfectionism is maintained as part of one's personality identity.

Three Types of Perfectionism

The development of various perfectionism measures discerned three types of perfectionism: other-oriented, socially prescribed, and self-oriented (Frost, Martin, Lahart, & Rosenblat, 1990; Hewitt & Flett, 1990). Other-oriented perfectionism (OOP) is defined as "demanding that others meet exaggerated and unrealistic standards" (Blatt,

1995, p 1006). Research on the affects and implications of OOP is limited as most research focuses on the effects of self-oriented and socially prescribed perfectionism. Costa and McCrae (1990) found OOP was associated with more confidence and competitiveness, and Blankstein et al. (2007) found a negative relationship between OOP and interpersonal hopelessness and suicide ideation in men. These findings support the notion that OOP can be considered part of adaptive perfectionism (Blankstein et al., 2007).

Socially prescribed perfectionism (SPP) is defined as "… the belief that others maintain unrealistic and exaggerated expectations that are difficult, if not impossible, to meet, but that one must meet these standards to win approval and acceptance" (Blatt, 1995, p 1006). The SPP is often classified as maladaptive perfectionism (Asseraf & Vaillancourt, 2015; Lo & Abbott, 2013; Stoeber, Schneider, Hussain, & Matthews, 2014). In fact, people who experience SPP often experience depressive symptoms (Enns et al., 2002; Stoeber et al., 2014) anxiety, anger (Stoeber et al., 2014), failure and hopelessness (Blankstein et al., 2007; Hewitt & Flett 1991a, 1991b; Frost et al., 1990). Alarmingly, Blankstein et al. (2007) found SPP significantly predicts suicidal ideation. Older studies examining the link between the forms of perfectionism and the five-factor model of personality found that SPP was linked to the neuroticism (Costa & McCrae, 1990) and had more negative mental health consequences (Hill et al., 1997).

Self-oriented perfectionism (SOP) is defined as "…exceedingly high, self-imposed, unrealistic standards and an intensive self-scrutiny and criticism in which there is an inability to accept flaws, faults, or failure within oneself across multiple domains" (Blatt, 1995, p 1006). Examining the dimensions and effects, SOP can be classified as

either adaptive or maladaptive perfectionism (Blankstein et al., 2007; Frost et al., 1993; Rice et al., 2005). At adaptive levels, self-oriented perfectionism can lead to resourcefulness and constructive striving towards one's goals (Flett, Hewitt, Blankstein, & Mosher, 1991; Flett, Hewitt, Blankstein, & O'Brien, 1991). At maladaptive levels it has consistently been linked to anxiety (e.g., Dunkley & Blankstein, 2000; Frost et al., 1993; Hewitt & Flett, 1991b; Stoeber et al., 2014). It appears SOP better explains the relationship between maladaptive perfectionism and anxiety as OPP and SSP have shown to have poorer or non-significant relationship with anxiety (Stoeber et al., 2014). The theoretical description of SOP and correlations with maladaptive and adaptive function fits results of an older study by Costa and McCrae (1990), who found SOP was positively associated with the conscientious factor of the big-five model of personality.

Perfectionism and Depression

Studies have found differences in the prevalence of depression in adaptive and maladaptive perfectionists. Specifically, adaptive perfectionism does not appear to be directly correlated with depression (Beiling et al., 2004; Rice et al., 1998) while numerous studies have found a correlation between maladaptive perfectionism and depression (Cheng et al., 2015; Enns et al., 2002; Hewitt & Flett, 1990; Macedo et al., 2015; Malinowski et al., 2017; Rice et al., 1998; Shahar et al., 2003; Sherry et al., 2014; Stuewig & McCloskey, 2005; Tran & Rimes, 2017; Wang et al., 2007). Interestingly, adaptive perfectionism was found to increase depression proneness (Enns et al., 2002), but not have a direct correlation with depressive symptoms (Rice et al., 1998). These perplexing results could be a result of failing to consider other variables as mediators. This was proven to be the case, as hope (Mathew et al., 2014) and optimism (Black &

Reynolds, 2013) were found to mediate the relationship between adaptive perfectionism and depression. While the studies examining adaptive perfectionism and depression are limited, results published thus far give reasonable implications towards the role of a possible mediator, such as self-compassion, that buffers between adaptive perfectionism and depression.

Studies examining the effect maladaptive perfectionism has on depression are vast and consistent in their findings (Cheng et al., 2015; Enns et al., 2002; Hewitt & Flett, 1990; Macedo et al., 2015; Malinowski et al., 2017; Rice et al., 1998; Shahar et al., 2003; Sherry et al., 2014; Stuewig & McCloskey, 2005; Tran & Rimes, 2017; Wang et al., 2007). The negative affect associated with heightened sensitivity to failures and subsequent self-criticism increases maladaptive perfectionists' vulnerability to depressive symptoms (Ehret, Joormann, & Berking, 2014; Rice et al., 1998; Sherry, et al., 2014; Stoeber et al., 2014). Increased vulnerability of depression is understandably given maladaptive perfectionists "[focus] primarily on issues of self-worth and self-criticism; they berate, criticize, and attack themselves, and experience intense feelings of guilt, shame, failure, and worthlessness," most of which are also symptoms of depression (Blatt, 1995, p. 1012).

Beck (1967) originally theorized a three-stage model of depression vulnerability that can help explain how maladaptive perfectionism can lead to depressive symptoms and suicide. Beck's model postulates that harsh and critical parenting leads to irrational and dysfunctional beliefs about the self, specifically beliefs about needing to be perfect for acceptance and approval from others, which then leads to an increased risk of depression and suicide due to consistent feelings of shame, guilt, and failure. Research

results from Enns et al., (2002) study supports this causal model explaining the development of depression as a result of perfectionism. Social mentality theory (Gilbert, 1989, 2001, 2005), which was used to support and guide this study, draws from Beck's (1967) cognitive behavioral theory, and can also explain how perfectionism leads to depression and suicide ideation, intent, and gestures. In short, the experiences involved in maladaptive perfectionism (i.e., concern about approval and acceptance, guilt, shame,) activate our threat system which is associated with feelings if insecurity, defensiveness, due to fear our social acceptance and position are in jeopardy (Gilbert, 2005). The critical self-evaluation associated with maladaptive perfectionism can "literally beat [perfectionists] down into a depression and are 'harassed' repeatedly by their own negative evaluations," which impacts neurological responses in the brain (Gilbert, 2005, p 293). The impact of perfectionism on psychological functioning is widespread and alarming. To further future research, the development of adequate scales that appropriately operationalize perfectionism were needed.

Measuring Perfectionism

A review of the literature by Rice et al., (2016), found 16 difference measures that assess the various forms of perfectionism. The most commonly used measures to assess various aspects of perfectionism, are the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991b); Frost Multidimensional Perfectionism Scale (FMPS: Frost et al., 1990; and The Almost Perfect Scale – Revised (APS-R, Slaney, Mobley, Trippi, Ashby, & Johnson, 1996; Slaney, Rice, Mobley, Trippi, & Ashby, 2001).

Multidimensional Perfectionism Scale. The Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991b) was created to measure the three types of

perfectionism: self-oriented, other-oriented, and socially prescribed perfectionism. It is a 45-item self-report questionnaire with three subscales consisting of 15-items each. The MPS has shown to have good psychometric properties and has been used in various studies over the decades (e.g., Hewitt, Flett, & Turnbull, 1992; Klibert, Langhinrichsen-Rohling, & Saito, 2005; Stoeber et al., 2014). In a sample of 156 college students (52 mean and 104 women), the coefficient alphas for each subscale were as follows: .86 (self-oriented perfectionism), .82 (other-oriented perfectionism), and .87 (socially prescribed perfectionism) (Hewitt & Flett, 1991b). The MPS was correlated with several other related construct measures; overall, self-oriented perfectionism was most correlated with high standards (.46), self-criticism (.46), and self-blame (.21); other-oriented perfectionism was correlated with other blame (.43), authoritarianism (.32), and dominance (.30); and finally socially prescribed perfectionism was most correlated with demand for approval of others (.27), fear of negative evaluation (.46), and locus of control (.20).

While it is one of the most commonly used measures, the primary purpose of the MPS is to measure the three types of perfectionism. Despite the purpose of the MPS, researchers have used it to measure adaptive and maladaptive perfectionism. Previous studies have found mixed results on how the three scales of the MPS load on adaptive and maladaptive perfectionism (e.g., Klibert et al., 2014; Lo & Abbott, 2013). Specifically, socially prescribed perfectionism has consistently been found to have higher positive correlations with depression and anxiety, while self-oriented perfectionism has had weaker results (Stoeber et al., 2014) and sometimes conflicting results by loading on

both adaptive and maladaptive perfectionism (Blankstein et al., 2007; Frost et al., 1993; Rice et al., 2005).

Frost Multidimensional Perfectionism Scale. The Frost Multidimensional Perfectionism Scale (FMPS) was developed by Frost et al., (1990) around the same time as the MPS, and was created to measure five dimensions of perfectionism: personal standards, concern over mistakes, parental expectations, doubting of actions, and organization. The questionnaire consists of 35 items measured on a five-point Likert scale. Internal reliability for each subscales scores based on a sample of 410 undergraduate students was as follows: .88 (concern over mistakes), .83 (personal standards), .84 (parental expectations), .84 (parental criticism), .77 (doubts and actions), and .93 (organization). Internal reliability for the entire scale was .90. Researchers demonstrated convergent validity of the FMPS with the Burns Perfectionism scale (.85), self-evaluative subscale (.57), and perfectionism subscale (.60). Overall the FMPS has shown to maintain its psychometric properties across multiple studies (e.g. Chang, Watkins, & Banks, 2004; Chang, 2002).

The primary purpose of the FMPS is to measure various theoretical components of perfectionism and assess for factors that have been found to lead to the development of perfectionism. The FMPS is commonly used when the purpose of the study is to examine the history and level of functioning of perfectionism. While not developed for the purpose of measuring adaptive and maladaptive perfectionism, the FMPS has been used to measure these two higher order factors of perfectionism (Beiling et al., 2004).

Almost Perfect Scale – Revised. The Almost Perfect Scale – Revised (APS-R) was designed by Slaney et al., (1996, 2001) to measure adaptive and maladaptive

measure. It is a 23-item questionnaire with three subscales: high standards, order, and discrepancy. The order and high standards subscale measure the desire for neatness and setting of high standards and loads onto the adaptive perfectionism factor. The discrepancy subscale measures the perceived discrepancy between one's standards and abilities to meet such standards and loads on the maladaptive factor. Each subscale demonstrated adequate psychometric properties in a sample of 809 undergraduate students from two Midwest universities. Cronbach's alpha for each scale were as follows: 91 (discrepancy), .85 (high standards), and .82 (order).

The APS-R has been used across multiple studies and populations to assess adaptive and maladaptive perfectionism (Levinson et al., 2015; Mobley, Slaney, & Rice, 2005). A major strength of the APS-R is its ability to adequately assess for adaptive and maladaptive perfectionism through cutoff scores with suitable sensitivity to each factor (Rice & Ashby, 2007), making it suitable for clinical use.

Perfectionism Inventory. The Perfectionism Inventory (PI; Hill et al., 2004) was designed to measure perfectionism and its two higher order factors: adaptive (conscientious perfectionism) and maladaptive perfectionism (self-evaluative perfectionism. Scores from the High Standards for Others, Organization, Planfulness, and Striving for Excellence subscales make up Conscientious Perfectionism with higher score equating to higher levels of Conscientious (adaptive) Perfectionism; and scores from the Concern over Mistakes, Need for Approval, Perceived Parental Pressure, and Rumination subscales make up Self-Evaluative Perfectionism with higher scores equating to higher levels of Self-Evaluative (maladaptive) perfectionism. Higher scores on the composite PI scale represent higher levels of perfectionism.

Convergent validity of the PI was found with its association with relevant subscales on the MPS-HF and MPS-F in a sample of 616 undergraduate students (Mean age = 18.9; SD 1.7). Overall, the Conscientious Perfectionism factor was associated with the self-oriented perfectionism subscale (.71) of Hewitt and Flett's (1991b) MPS, and the personal standards (.70) and organization (.76) of Frost et al., (1990) MPS (Hill et al., 2004). Self-Evaluative Perfectionism had strong correlations with socially-prescribed perfectionism (.74) of Hewitt and Flett's (1991b) MPS, and concerns over mistakes (.78), and doubts about action (.67) of Frost et al., (1990) MPS. These results support the use of the PI in accurately measuring the two factors of perfectionism. Lastly, the PI accounts for more variance in scores and has higher predictive power in 59 items, than the combined 90 items of both MPS scales (Hill et al., 2004), making it an appropriate measure to use for the purposes of this study.

Psychometric support for the PI has been demonstrated across several studies. The norming sample of the PI consisted of 250 undergraduate students with a mean age of 18.9 years (SD 2.6; 63% women, 28% men, 93% Caucasian, 7% African American) (Hill et al., 2004). Cronbach's alpha for each scale is as follows: Concern Over Mistakes (.86), High Standards for Others (.83), Organization (.91), Perceived Parental Pressure (.88), Planfulness (.86), Rumination (.87), Striving for Excellence (.85), Conscientious Perfectionism (.75), Self-Evaluative Perfectionism (.79), and overall PI Composite (.83). Further psychometric properties of the PI are discussed further in Chapter 3. Overall, the PI has demonstrated adequate validity and reliability across studies. The PI was used in this study because it measures adaptive and maladaptive perfectionism continuously without the use of a cutoff score.

Self-Compassion

Common experience indicates people are often more critical and unkind towards their own performance and appearance than others (Neff, 2003b). Individuals that are self-critical often need frequent external validation (Wei, Mallinckrodt, Larson, & Zakalik, 2005) and tend to focus on and exaggerate their own experience, which isolates them from others (Mikulincer, Shaver, & Pereg, 2003). Intrapsychic feelings, such as rumination (Harris et al., 2008), guilt, self-criticism (Cheng et al., 2015), and feelings of isolation (Nolen-Hoeksema, 1991) have been associated with negative outcomes including depression, emphasizing all the more the importance of self-compassion. Self-compassion includes being able to be kind to oneself in the face of failure, and identify personal shortcomings as part of the human experience (Neff, 2003b). It has been found to help protect against numerous mental health concerns such as self-judgment (Horney, 1950), depression, and anxiety (Arimitsu & Hofmann, 2015; Castilho et al., 2017; Friis et al., 2016; Mehr & Adams, 2016; Podina et al., 2015; Stephenson et al., 2017). Self-compassion has a rich history of origin in Eastern philosophy, but has been mostly overlooked in Western psychology for decades.

Origins and Theory

Self-compassion has been a part of Eastern philosophy for centuries, and is a relatively new concept to Western cultures (Neff, 2003b). A thorough review of original work on the development of self-compassion was conducted and discussed in the following section. Self-compassion originated in Buddhist psychology, and has been discussed in Western psychology through early works of humanistic psychology (Ellis, 1973; Jordan, 1989; Maslow, 1968; Rogers, 1961). Carl Rogers (1961) discussed

concepts of self-compassion by emphasizing the importance of having a caring and nurturing stance towards oneself, or *unconditional positive regard* towards the self. Similarly, Maslow's (1968) *Toward a Psychology of Being* describes the importance of people being aware of and accepting their own shortcomings in order to grow. Ellis (1973) described an analogous concept of *unconditional self-acceptance* where one should develop an intrinsic sense of self-worth that is neither rated nor evaluated. Lastly, Judith Jordan (1989) talked about *self-empathy* in her writings that emphasizes the importance of having a non-judgmental stance towards the self. While Maslow, Rogers, Ellis, and Jordan label their construct differently, they all talk about some of the main components of self-compassion: self-kindness and sharing in the common human experience (Neff, 2003b). While self-compassion initially appears to be solely an intrapersonal process, the importance and emphasis of identifying with the common human experience fosters a sense of community without an excessive focus on the individual (Neff, 2003b).

Compassion is defined as "…being touched by the suffering of others, opening one's awareness to others' pain and not avoiding or disconnecting from it, so that feelings of kindness toward others and the desire to alleviate their suffering emerge" (Neff, 2003b, p 87). Therefore, self-compassion is defined as "…being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness…[and] one's experience is seen as part of the larger human experience" (Neff, 2003b, p 87). An essential component of self-compassion is the presence and use of mindfulness (Neff, 2003b).

Mindfulness is the ability to be present in the moment and not judge the experience as good or bad. It is a level of awareness that prevents the over-identification or dissociation from an experience (Neff, 2003b). Mindfulness is needed in self-compassion as it provides enough distance from one's experience for feelings of self-kindness and identification with the common human experience to arise (Jopling, 2000). Furthermore, it increases self-understanding and fights against egocentric thinking that causes isolation from common humanity. Mindfulness allows self-compassion to act as an emotion regulation process in that it allows enough separation from the experience for one to have kindness and stop judging and berating oneself for mistakes or transgressions. This separation from one's experience allows for self-acceptance and increased awareness of one's experience (Fredrickson, 2001). Mindfulness also allows for the development of the Buddhist construct *discriminating wisdom*. Where judgment critically evaluates persons, events, behaviors, etc. as good or bad, discriminating wisdom evaluates actions with the understanding of complex dynamics and does not link the evaluation to self-worth (Neff, 2003b).

Social mentality theory explains how self-compassion can be viewed as an emotion regulation strategy. Gilbert and Irons (2005) hypothesized that self-compassion activates the self-soothing system in the brain that increases the ability to experience intimacy, have effective coping, and affect regulation. The self-soothing system is associated with feelings of safeness, secure attachment, and activation of the oxytocin-opiate system (Gilbert, 1989, 2005). Self-compassion helps people feel connected, calm, and cared for by increasing overall well-being (Gilbert, 2005). Furthermore, self-

compassion fosters kindness and connectedness by neutralizing over-identified negative emotions (Neff, Hsieh, & Dejitthirat, 2005).

Self-Compassion and Development

Neff (2003a, 2003b) has identified three main components that make up self-compassion: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. Self-kindness versus self-judgment includes being able to be kind to oneself and not be self-critical or judgmental. Common humanity versus isolation is being able to identify one's experience as part of the larger human experience and not isolate oneself with the belief that the hardships could only happen to them. Lastly, mindfulness versus over-identification is the ability to hold one's painful experiences and thoughts in balanced awareness without over-identifying with them (Neff, 2003a, 2003b). If one is self-compassionate towards themselves when facing failures or mistakes, they are able to: be kind to themselves instead of excessively berating and criticizing themselves; identify that making mistakes is part of the human experience instead of believing "this is something that can only happen to me;" and is able to move past their mistake or failure without ruminating and obsessing about it (Neff et al., 2007).

Of increasing importance is the distinction between self-compassion and passivity. Neff clarifies that "self-compassion requires that one does not harshly criticize the self for failing to meet ideal standards, it does not mean that one's failings go unnoticed or unrectified" (Neff, 2003b, p 87). Ironically it is the lack of self-compassion that leads to passivity because it has been theorized that ego defenses serve to protect the ego by keeping inadequacies outside of conscious awareness (Horney, 1950). This lack of

awareness is what allows inadequacies to remain and flourish, whereas self-awareness that is essential in self-compassion allows one to hold their inadequacies in balanced awareness without fear of self-critical condemnation (Brown, 1999).

Self-compassion and self-esteem are similar in that they both support overall well-being and are linked to self-identity. While similar, evidence supports that self-esteem and self-compassion are separate constructs (Arimitsu & Hofmann, 2015; Neff, 2003b). Recent studies have found pitfalls to the pursuit of self-esteem (Crocker & Park, 2004), including distorted self-perception (Sedikides, 1993); prejudice (Aberson, Healy, & Romero, 2000); narcissism (Bushman & Baumeister, 1998); and violence towards others that threaten their identity and self-esteem (Baumeister, Smart, & Boden, 1996). Gilbert and Irons (2005) have even described self-esteem as a process that allows people to rank their superiority/inferiority to establish their place in society. Unlike self-esteem that includes comparisons towards others, self-compassionate individuals are able to have more compassion towards others and therefore do not engage in downward social comparisons to increase their-sense of self-worth (Neff, 2003b). Neff (2003b) hypothesized that self-compassion is more beneficial than self-esteem because it has all the strengths of self-esteem without any of the pitfalls like prejudice and narcissism. Specifically, self-compassion allows one to be accepting of ones inadequacies while not needing to "adopt an unrealistically positive view of oneself" that is observed in self-esteem (Neff et al., 2007, p 145). It is evident that self-compassion is a beneficial self-soothing strategy that improves several factors of functioning. It is important to further this understanding by also identifying how self-compassion develops within the individual.

Studies examining how self-compassion develops within the individual are limited; possibly due to self-compassion being a relatively new construct to research with an increase in studies examining the impact of self-compassion starting in the mid 2000's. Similar to the development of perfectionism, it is theorized that the development of self-compassion is also highly influenced by parenting styles and interactions (Brown, 1999; Neff, 2003b). Stolorow, Brandchaft, and Atwood, (1987) originally theorized that the ability to recognize and acknowledge one's internal emotional experiences is linked to the internalization of empathic responses experienced as a child. Children who receive warm and empathic responses from their parents are more likely to have more self-compassion as adults than children who experienced critical and/or abusive parents (Brown, 1999).

Self-Compassion and Mental Health

Self-compassion originated from Buddhist philosophy and includes taking a positive and caring emotional stance towards oneself while holding inadequacies in a balanced awareness (Neff, 2003a). The positive mental state inherent within self-compassion could act as a protective factor against various psychopathologies. In fact, self-compassion has been found to have a negative correlation with depression (Arimitsu & Hofmann, 2015; Krieger et al., 2013; Ehret et al., 2014; Friis et al., 2016; Johnson & O'Brien, 2013; Neff 2003b; Neff et al., 2007; Pinto-Gouveia, Duarte, Matos, & Fráguas, 2014; Podina et al., 2015; Stephenson et al., 2017; Wong & Mak, 2013; Yamaguchi, Kim & Akutsu, 2014), anxiety (Arimitsu & Hofmann, 2015; Neff et al., 2007; Stephenson et. al., 2017), shame (Johnson & O'Brien, 2013; Williams, 2015) self-criticism (Ehret et al., 2014), rumination (Krieger et al., 2013; Williams, 2015), and avoidance of behaviors and

cognitions (Krieger et al., 2013). Even more alarming is that low levels of self-compassion has shown to not only increase the chances for one to experience depression, but increases the risk of continuing to experience episodes of depression throughout their life (Ehret et al., 2014). Furthermore, it has been suggested that depressed individuals could be missing out on the protective elements inherent in self-compassion and could possibly benefit from interventions that promote self-compassion (Krieger et al., 2013). A longitudinal study examining the protective factors of self-compassion was examined in a sample of adolescents and found data to support that self-compassion protects against negative affect and self-judgment (Marshall et al., 2015).

Self-compassion has been found to have a positive correlation with: life satisfaction (Neff, 2003a), happiness, positive affect (Arimitsu & Hofmann, 2015; Neff et al., 2007), psychological well-being (Neff, 2004; Neff & Germer, 2013; Williams, 2015), social connectedness (Neff & McGehee, 2010; Neff et al., 2007), emotional intelligence, and self-determination (Neff, et al., 2005). Furthering the interest into the positive effects of self-compassion on levels of functioning, studies have found that self-compassion is connected to better academic integration, adjustment, and performance amongst college students (Neff et al., 2007; Neff et al., 2005). Whereas, individuals who are unable to have self-compassion have been found to feel less happiness (Wei et al., 2011). Researchers have increasingly shown interest in the effects of self-compassion, with studies continuing to use the same self-compassion measure to operationalize and measure self-compassion.

Measuring Self-Compassion

Compared to perfectionism, shame, and depression, self-compassion is a relatively new construct to Western psychology and research (Neff, 2003b). Self-compassion and its protective qualities have gained more focus in research and practice since the mid 2000's. Neff (2003a) developed the Self-Compassion Scale (SCS) and has remained the primary measure used in research to operationalize self-compassion. While other measures, such as a mindfulness questionnaire, tap into characteristics of self-compassion, the SCS remains the only measure to assess the entire construct of self-compassion. The SCS and the SCS-short form are reviewed.

Self-Compassion Scale. The Self-Compassion Scale (SCS) was developed by Neff (2003a) to measure the dimensions of self-compassion. While it was theorized when it was developed there would be a three-factor structure to the SCS, factor analysis revealed a six-factor structure: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. The SCS is comprised of 26-items, was normed on 391 undergraduate students and had an overall internal consistency reliability of .92; the internal consistency reliability of each subscale was as follows: .78 (self-kindness), .77 (self-judgment), .80 (common humanity), .79 (isolation), .75 (mindfulness), and .81 (over-identification; Neff, 2003a). Convergent validity demonstrated with its correlation with various scales of similar construct definitions. Specifically, the SCS had a negative correlation (-.65) with the Self-Criticism subscale of the Depressive Experience Questionnaire, a positive correlation (.41) with Social Connectedness; and Attention (.11), Clarity (.43), and Repair (.55) of emotional intelligence. The validity and reliability of the SCS makes it a strong measure that operationalizes self-compassion. To help

shorten the length of the SCS, Raes et al., (2011) shortened the measure to help with the practicality of its use in research.

Self-Compassion Scale - Short Form. The Self-Compassion Scale – Short Form (SCS-SF; Raes et al., 2011) contains 12 items that are also found on the original SCS. The internal reliability coefficient for the SCS-SF in a sample of 415 college students was (.86 – whole scale, .54 – self-kindness, .63– self-judgment, .62 – common humanity, .68– isolation, .69 – mindfulness, and .75 – over-identification). The SCS-SF had nearly perfect correlation (.98) with the original SCS, showing that it adequately measure self-compassion as defined and measured in the original SCS. Due to the poor internal reliability coefficients for each subscale on the SCS-SF, the interpretation of individual subscales is not recommended and is a limitation of this measure (Raes et al., 2011). However, for the purposes of this study, which studied self-compassion as a single construct, the SCS-SF was an appropriate measure and was used to measure self-compassion to help reduce testing fatigue.

Shame

Tangney and Dearing (2002) describe shame as a deep, personal, painful emotion that has a lasting impact on the individual, their interpersonal relationships, and influences their behavior and self-identity. As an internal emotion of self-blame, shame is difficult to research because it is not observable by others and is often confused with feelings of guilt (Tangney & Dearing, 2002). Shame involves feelings of: worthlessness, powerlessness, disgust, inferiority, self-consciousness, and feeling small and exposed (Kim et al., 2011; Tangney et al., 1996; Tangney & Tracy, 2012; Tangney et al., 1992). Feelings of shame also contribute to subsequent interpersonal behaviors; individuals who

experience shame may wish to hide their inadequacies by withdrawing and isolating from others (Smith, Webster, Parrott, & Eyre, 2002; Tangney & Tracy, 2012), and may shift blame and express anger towards others (Lewis, 1971; Tangney et al., 1996; Tangney et al., 1992).

Contributing Factors to the Development of Shame

After a review of previous literature, shame has been conceptualized as a negative painful evaluation of the entire self, with the common conclusion that one is "bad" or immoral (Tangney et al., 1992). This process is complex and almost entirely internal, and yet heavily influenced by a perceived judgmental audience (Smith et al., 2002). Individuals who experience shame are highly sensitive to the perceived criticism and evaluation of others, which impacts their internal self-critical evaluation process (Kim et al., 2011) and contributes to subsequent behaviors of withdrawal and isolation.

It has been postulated that feelings of shame evolved as a psychological response to social status and acceptance in the community and alerts one to possible social rejection (Fessler, 2004; Gilbert, 1998; Gruenewald, Dickerson, & Kemeny, 2007; Keltner & Buswell, 1996; Leary, 2007; Tangney & Tracy, 2012). Basic emotions and self-conscious emotions develop and serve different evolutionary purposes. Basic emotions (such as happiness, fear, anger, etc.) develop to address urgent threats and situations (Levenson, 1999), whereas self-conscious emotions develop to address "social survival" (Fessler, 2004; Gilbert, 1998; Gruenewald et al., 2007; Keltner & Buswell 1996; Leary, 2007; Tangney & Tracy, 2012). Shame is classified as a self-conscious emotion (Kim et al., 2011), which develops by the end of the second year or beginning of the third year of life (Lagattuta & Thompson, 2007). Children become aware and able to

distinguish between basic and self-conscious emotions, such as shame, in early childhood (Tangney & Dearing, 2002). In order to recognize and distinguish shame from other self-conscious emotions, researchers found one must be able to engage in self-reflection and self-evaluation. Early researchers of shame identified the following requirements in order to distinguish shame and other self-conscious emotions from primary emotions: self-reflect and understand the responsibility for one's behavior (Kagan, 1981); have personal standards and expectations for one's behavior (Stipek, Recchia & McClintic, 1992); able to recognize deviations from one's personal standards (Weiner, 1985); and have a sense of identity that is separate from others (Lewis & Brooks-Gunn, 1979).

There are also different cultural recognitions of self-conscious emotions. Basic emotions are believed to be pan-cultural because they develop to address universal basic needs across cultures. There is evidence to support that basic emotions are experienced the same throughout cultures and share similar facial expressions (Kim et al., 2011). Self-conscious emotions such as shame are heavily influenced by cultural expectations and customs. Furthermore, situations that give rise to, and the importance placed on, self-conscious emotions varies across cultures (Wong & Tsai, 2007); this theoretically aligns with the construct description of self-conscious emotions as their purpose it to help navigate one's social world (Muris & Meester, 2014). Similarly, self-conscious emotions are harder to recognize because the outward expressions are more complicated and difficult for others to identify (Kim et al., 2011).

Two Factors of Shame

Researchers of shame have also postulated that there are two varieties of shame *external* and *internal shame* (Gilbert, 1998; Smith et al., 2002), with research findings

supporting the validity of these two factors (Kim et al., 2011; Matos et al., 2013; Pinto-Gouveia, Matos, Castilho, & Xavier, 2014). Theoretically, external shame has a more negative impact on mental health and interpersonal functioning (Leary 2004, 2007). Humans have an evolutionary instinct to seek out social connectedness and belonging. External shame could activate a primitive reaction of danger of losing one's social acceptance and place in the community. This subsequently can lead to psychological distress such as increased anxiety and depression (Leary 2004, 2007). Kim et al. (2011) found support that external shame may be more detrimental to mental health because it was found to have a stronger correlation to symptoms of depression than internal shame.

While external shame could have stronger correlations with negative mental health consequences like depression, internal shame has been found to have a negative impact on mental health as well. Internal shame can still be an extremely painful experience and cause psychological maladjustment. In fact, internal shame has shown to have a significant positive correlation with depression (Matos et al., 2013; Pinto-Gouveia, Matos, et al., 2014) and submissive behavior (Pinto-Gouveia, Matos, et al., 2014). Since humans are inherently social beings, internal shame may be less threatening than external shame because one does not worry about losing the approval of their community (Leary 2004, 2007).

Shame versus Guilt

Two self-conscious emotions commonly linked together in research and conceptualization is shame and guilt (Tangney & Dearing, 2002). Lewis (1971) originally postulated the main difference between shame and guilt was the role of the self. Shame involves the evaluation of the entire self; it is "I'm a bad person," instead of "I did a bad

thing." Whereas guilt does not impact one's core identity, and is the evaluation of an event; it includes statements of "I feel bad about…" instead of "I'm a horrible person because of …." Shame is also different from guilt in the direction of attention. Shame is an internally focused process. It focuses on one's internal pain and understanding of the self; it is a harsh, often debilitating, and critical evaluation of one's core identity and leads to a belief that one has characterological defects (Schoenleber & Berenbaum, 2012). Whereas, guilt is an externally focused process, it focuses on the pain of others and on a specific transgression (Kim et al., 2011).

The effects of shame and subsequent behaviors are vast. Shame impacts how we interact with others by hindering our ability to connect. Shame creates the desire to withdraw and hide, while often blaming and directing anger towards others. It can also create an intense bitter type of anger that can escalate to hostility, which hinders one's ability to have empathy towards others (Tangney & Dearing, 2002; Tangney et al., 1992). Furthermore, unlike guilt, shame appears to be pervasive and global across various situations and time (Schoenleber & Berenbaum, 2012). Guilt actually increases our interpersonal interactions because the focus of guilt is on other's pain, and wanting to find self-forgiveness for one's role in the transgression (Tangney, 1991; Tangney & Dearing, 2002). The external focus of guilt allows for more empathy and connectedness with the community (Tangney & Dearing, 2002). Based on these descriptions between shame and guilt it is reasonable to conclude that guilt is a more adaptive function for social functioning than shame.

Tangney and Dearing (2002) found empirical support for the distinction between guilt and shame, in addition to its attributions towards the self. Three causal attributions

explain the dynamics of shame: stability, controllability, and globality (Greenberg, 2004; Tangney & Dearing, 2002). Stability explains how much an attribute fluctuates; controllability explains that amount of control and influence an individual is able to have over an attribute; and globality explains whether an attribute is generalizable across settings or is specific to certain situations (Tangney & Dearing, 2002). Shame is a stable, uncontrollable, and global attribute, while guilt is unstable and specific (Tracy & Robins, 2006). Lastly, shame has been associated with depression (Cheung et al., 2004; De Rubeis & Hollenstein, 2009; Matos et al., 2013; Pinto-Gouveia, Matos, et al., 2014; Stuewig & McCloskey, 2005) and rumination, where guilt has not been found to be associated (Joireman, 2004; Fontaine et al., 2001; Harder, Cutler, & Rockart, 1992; Orth, Berking, & Burkhardt, 2006; Stuewig & McCloskey, 2005; Tangney et al., 1992).

Shame and Mental Health

Lewis (1971) originally hypothesized that the experiences of shame would increase one's vulnerability to affective disorders. In fact, shame has been found to have negative effects on mental health and interpersonal functioning. In regards to mental health, shame has consistently been found to be positively correlated with depression (Castilho, Pinto-Gouveia, & Duarte, 2016; Cheung et al., 2004; Costa et al., 2016; De Rubeis & Hollenstein, 2009; Matos et al., 2013; Pinto-Gouveia, Matos, et al., 2014; Stuewig & McCloskey, 2005) these findings appear to hold true above and beyond the effects of attributional style and guilt (Cheung et al., 2004; Fontaine et al., 2001; Harder et al., 1992; Stuewig & McCloskey, 2005; Tangney et al., 1992).

Shame is also positively correlated with personality pathology (Schoenleber & Berenbaum, 2012), neuroticism, somatization, obsessive-compulsive disorder,

psychoticism, paranoid ideation, interpersonal sensitivity, anxiety, and phobic anxiety (Tangney & Dearing, 2002), rumination (Fontaine et al., 2001; Harder et al., 1992; Joireman, 2004; Nolen-Hoeksema, 2000; Nolen-Hoeksema, Parker, & Larson, 1994; Orth et al., 2006; Stuewig & McCloskey, 2005; Tangney et al., 1992), submissive behaviors (Pinto-Guoveia, Matos, et al., 2014), and self-harm (Gilbert, McEwan, Bellew, Mills, & Gale, 2009). In addition to having a positive correlation with the above-mentioned psychological distress and disorders, evidence supports that the presences of psychopathology can lead to further bouts of shame (Tangney et al., 1992), which was especially evident in people with depression (Andrews et al., 2002). Interpersonally, shame was correlated with: decreased empathy, blaming, anger, and hostility (Tangney, 1991; Tangney et al., 1992).

Measuring Shame

Shame has been a complex experience to study due to its highly personal an internal process. Several researchers have struggled to operationally distinguish shame from guilt, which complicates the ability to adequately measure shame in isolation. A few of the most commonly used measures of shame are the Shame and Guilt Scale (SGS; Alexander, Brewin, Vearnals, Wolff, & Leff, 1999), the Test of Self-Conscious Affect (TOSCA; Tangney, Dearing, Wagner, & Gramzow, 2000), and the Experience of Shame Scale (EFF; Andrews et al., 2002).

Test of Self-Conscious Affect - 3. One of the oldest and widely used measures to assess for shame and guilt is the Test of Self-Conscious Affect-3 (TOSCA-3; Tangney et al., 2000). It is the most up to date version of the TOSCA. It is a scenario-based test that gives participants various scenarios to which they are to rate how they would react by

quantifying their level of shame and/or guilt. The TOSCA-3 is a 16-item test that measures shame proneness and guilt proneness. At norming, the internal reliability coefficient was .94 for shame and.93 for guilt. However, when used in another study with undergraduate students the internal reliability coefficient for each respective scale fell to .76 and .66 (Lutwak, Panish, Ferrari, & Razzino, 2001).

The TOSCA has been widely used to measure shame (Andrews et al., 2002) and prior to using this measure it would be important to note that it only measures the proneness of shame and guilt by giving participants scenarios in which they scale how they perceive their shame and guilt experience would be. For the purpose of this study, it would be prudent to use a measure that adequately assesses current experiences of shame in order to determine if it acts as a mediator.

Shame Inventory. The shame inventory (Rizvi, 2009) was developed to assess for event specific shame as well as globally oriented shame. The development of the Shame Inventory was to use in clinical populations to help decrease shame in suicidal patients (Rizvi & Linehan, 2005). The shame inventory is unique in that the second half (as labeled by the scale developers) (50 items) measures state shame, while the first part (3 items) measures trait shame (Rizvi, 2009). The questions composed of the state shame section are scenario based, similar to the TOSCA-3, while the questions that measure trait shame are more global statements about feelings of shame. The scenario based questions were developed to specifically measure shame to personal life events.

The Shame Inventory appears to be strong assessment that measures shame with high psychometric properties (Rizvi, 2009). The current study aimed to measure trait

shame that is not specific to life events and therefore the TOSCA-3 was not the best measure for the purpose of this study as it focuses on state shame.

Experience of Shame Scale. The Experience of Shame Scale (ESS; Andrews et al., 2002) measures characterological, behavioral, and bodily shame. The ESS was theoretically developed based on the TOSCA, and Andrews and Hunter's (1997) shame interview. It specifically measures the emotional, cognitive, and behavioral components of shame, which align with the intrapersonal process (Tangney & Dearing, 2002) and interpersonal (Gilbert, 2005) of shame. The ESS has demonstrated strong psychometric properties and, important to this study, it has shown to have predictive qualities to depressive symptoms. Furthermore, the ESS has been shown to be more a reflection of self and performance (Andrews et al., 2002).

The ESS has shown convergent/divergent validity with expected scales on the TOSCA (TOSCA shame scale (.61), TOSCA guilt scale (.23)). The ESS was normed on 163 undergraduate students from the University of London College. The internal consistency reliability for the entire scale was .92 with test-retest reliability after an 11-week period of .83. The internal consistency reliability for each scale was as follows: .90 (characterological shame), .87 (behavioral shame), and .86 (bodily shame). The test-retest reliability over 11 weeks for each subscale was .78, .74, and .82 respectively (Andrews et al., 2002).This study will use the ESS to measure shame as it measures various aspects of shame (behavioral, characterlogical, and bodily) which are often connected to the experiences of perfectionism.

Perfectionism, Shame, and Self-Compassion

The poor functioning and subsequent psychopathology commonly observed in individuals with maladaptive perfectionism raises many concerns for counseling psychologists, and especially college counseling centers since there is a higher concentration of perfectionism on college campuses (Grzegorek et al., 2004). It is becoming more and more essential that counseling psychologists find interventions to help decrease depression, shame, and suicides among individuals with perfectionism. One such intervention could possibly be found in self-compassion. Self-compassion has shown a consistent negative correlation with depression, thereby being a promising protective factor (Krieger et al., 2013). The purpose of this study is to examine how shame and self-compassion affect the relationship between the two factors of perfectionism (adaptive and maladaptive) and depression.

Depression

Shame has repeatedly been found to be significantly correlated with depression (Cheung et al., 2004; De Rubeis & Hollenstein, 2009; Matos et al., 2013; Pinto-Gouveia, Matos, et al., 2014; Stuewig & McCloskey, 2005), and be a result of high levels of maladaptive perfectionism (Ashby et al., 2006; Fedewa et al., 2005). Shame may mediate the relationship between maladaptive perfectionism and depression. If so, it would imply important treatment indicators when treating clients with high levels of perfectionism that struggle with depression. Furthermore, self-compassion has been identified as a possible protective factor against depression (Arimitsu & Hofmann, 2015; Ehret et al., 2014; Johnson & O'Brien, 2013; Krieger et al., 2013; Pinto-Gouveia, Matos et al., 2014; Podina et al., 2015; Wong & Mak, 2013; Yamaguchi et al., 2014).

Self-Compassion has repeatedly been shown to have positive effects on mental health, functioning, and overall well-being (e.g., Arimitsu & Hofmann, 2015; Neff et al., 2007; Williams, 2015) and a negative correlation with depression (e.g. Arimitsu & Hofmann, 2015; Ehret et al., 2014; Johnson & O'Brien, 2013; Krieger et al., 2013; Pinto-Gouveia, Matos et al., 2014; Podina et al., 2015; Wong & Mak, 2013; Yamaguchi et al., 2014). While it is reasonable to imply that self-compassion would mediate between adaptive perfectionism and depression, it is also worth considering how self-compassion may impact the correlation between maladaptive perfectionism and depression. Social mentality theory helps support the idea that self-compassion would help decrease the negative effects of perfectionism and shame by activating the self-soothing system of the brain. Thus, allowing for self-acceptance and improved overall well-being. In order to adequately assess for a mediating effect in the current study, it is important to use a measure that sufficiently measures and operationalized depression.

Measuring Depression

Depression has long been studied across decades and cultures (e.g., Kroenke et al., 2001; Raes, 2010). Numerous measures have been developed to operationalize and assess for the presence, frequency, and severity of depressive symptoms. Similarly, the majority of measures used base their criteria on DSM-IV diagnosis criteria (Beck et al., 1996; Radloff, 1977; Kroenke et al., 2001). Two of the more commonly used measures today include the Beck Depression Inventory – II (Beck et al., 1996), and the Patient Health Questionnaire – 9 (Kroenke et al., 2001). Other measures of depression have been developed to help measure depression in specific populations, such as the Center for Epidemiological Studies – Depression Scale (CES-D), which was developed to identify

depression within rheumatoid arthritis patients (Radloff, 1977). More important to this study, the BDI-II and the PHQ-9 are two commonly used measures that are global measures of depression that has been used across populations and cultures (Beck et al., 1996; Kroenke et al., 2001; Wang & Gorenstein, 2013).

Beck Depression Inventory-II. The Beck Depression Inventory-II (BDI-II; Beck et. al., 1996) is a 21-item, self-report measure that assesses depression symptoms based on DSM-IV symptom criteria. A meta-review of studies that have used the BDI-II has demonstrated strong, consistent psychometric properties across numerous studies (Wang & Gorenstein, 2013). While the BDI-II is possibly one of the most widely known depression measures, the costs to use the BDI-II through Pearson limit the practicality of used the BDI-II for this study. The BDI-II also has more questions than the PHQ-9, which would lengthen the time needed to complete the survey package for this study.

Patient Health Questionnaire-9. The Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001) is the depression component found in the original Patient Health Questionnaire (PHQ). The PHQ-9 is free to use for research purposes and has held strong psychometric properties across studies that have used various populations (Eisenberg, Nicklett, Roeder, & Kirz, 2011; Kroenke et al., 2001; Instructional, n.d.).

To establish criterion validity of the PHQ-9, participants were interviewed by a mental health professional that identified whether the participant qualified for a diagnosis of depression. Results found a positive correlation between PHQ-9 scores and a diagnosis of major depression (Kroenke et al., 2001). The PHQ-9 was normed over two studies with a total of 6,000 participants (3,000 patients from a primary care for study 1) 3,000 patients from OBGYN for study 2). The internal consistency coefficient was .89 for the

sample of study one and .86 for the sample of study two. Overall, the PHQ-9 has been used across multiple settings, with different populations, and has been translated into 47 different languages (Instructional, n.d.). Due to the strong psychometric properties, that are further discussed in Chapter 3, and easier accessibility and affordability of the PHQ-9, it was used to measure depression in this study.

Summary

Perfectionism, shame, and depression and their effects have been studied for decades (e.g., Blatt; 1995; Macedo et al., 2015; Malinowski et al., 2017; Tangney & Dearing, 2002). Self-compassion, a relatively new construct to the field of psychology and research, has recently gained more attention due to its protective factors against psychopathology (Arimitsu & Hofmann, 2015; Castilho et al., 2017; Mehr & Adams, 2016; Neff et al., 2007; Stephenson et al., 2017; Williams, 2015). The need to further examine the positive effects of self-compassion is needed, especially whether self-compassion could mediate and protect against the onset of depression in individuals with both forms of perfectionism.

Social mentality theory supports why self-compassion and shame could mediate the relationship between perfectionism and depression through their impact on feelings of social belongingness or rejection. Furthermore, it clarifies why perfectionism can lead to maladaptive qualities due to self-criticism (Gilbert, 2005). Various measures have been used to operationalize and assess for perfectionism (Frost et al., 1990; Hewitt & Flett, 1991b; Slaney et al., 1996, 2001), shame (Andrews et al., 2002; Tangey et al., 2000; Rizvi, 2009), and depression (Beck et al., 1996; Kroenke et al., 2001). A review of

available measures was discussed in addition to their strengths of concerns in regards to this study.

CHAPTER III

METHODOLOGY

The sample for this study was recruited via convenience sampling at a University in the Rocky Mountain region during the spring 2016 semester. The sample consisted of 226 undergraduate (Freshman 18.1%; Sophomore 11.5%; Junior 13.7%; Senior 19.9%) and graduate (MA 22.6%; Doctoral 9.7%) students. There were 51 males, 172 females, three participants who identified as "other;" and mean age was 26.3 (9.6 *SD*). The sample (see Table 1) consisted of 174 (77%) Caucasian, 11 (4.9%) African American, 5 (2.2%) Asian, 23 (10.2%) Latino/a, and 13 (5.8%) Other.

Procedure

Upon approval from the Institutional Review Board of the researcher's university's (IRB; see appendix A), volunteer participants from the student body were recruited via email invitation distributed to both graduate and undergraduate students. A total of 1000 student emails were gathered. Recruitment emails were distributed in the following manner: 300 emails were sent on day one, 300 on day two, and 400 on day three. Reminder emails were sent in the same ordered fashion after a three day laps from the original email. This cycle continued until all 1000 students received a total of three recruitment emails. The recruitment email included a brief description of the study and a link to the survey package (see Appendix B). Participation was voluntary. Participants were offered the opportunity to be entered into a random drawing for one of three $25.00

Amazon gift cards. Upon completion of the survey package, participants were given a link to a separate survey where they could enter their email address to participate in the drawing. Since the survey to enter their email address was separate from the questionnaire package, the identity of participants was not connected to their responses to the questionnaires. All survey instruments were administered electronically through the use of the survey software, Qualtrics (2015).

After participants went to the survey package, they were directed to the informed consent document (see Appendix C). Endorsement of the informed consent by clicking *continue* was required prior to starting the survey. Identifying information was not gathered; participants were reminded of their anonymity and were instructed to answer honestly. Participants could discontinue the survey at any time without repercussions. Participants were asked to complete the following questionnaires: Perfectionism Inventory (PI; Hill et al., 2004); Self-Compassion Scale – Short Form (SCS-SF; Raes et al., 2011); Experience of Shame Scale (ESS; Andrews et al., 2002); and the Patient Health Questionnaire – 9 (PHQ-9; Kroenke et al., 2001). Order effect was controlled for by randomizing the order the questionnaires were presented for each participant. The researcher obtained permission from the developers of the PI, SCS-SF, and ESS (see Appendix D-F respectively) to use their respective measures in a web-based study. Permission for the PHQ-9 (see Appendix G) was not needed as it has been published for public use. Participants were also asked to complete a demographic questionnaire (see Appendix H) that included: age, gender, ethnicity, level of education (graduate or undergraduate), and year in school (see Table 1). At the end of the survey, or upon withdrawal, participants were given a list of available resources for counseling services in

the community (see Appendix H) in the event any discomfort was experienced from participating in this study. Only the data from participants who completed all questionnaires were included in the data analysis. To help prevent missing data, a response to every item was required for each question; if participants wished to not answer, they could discontinue the survey without repercussion and still be entered into the drawing.

Table 1

Summary of Demographic Variables

Demographic Variables		**N**	**% of Sample**
Gender Identity	Male	51	22.6
	Female	172	76.1
	Other	3	1.3
Level of Education	Undergraduate	153	67.7
	Freshman	41	18.1
	Sophomore	26	11.5
	Junior	31	13.7
	Senior (4+)	45	19.9
	Undergraduate (did not disclose year)	10	4.4
	Graduate MA	51	22.6
	Graduate Doctoral	22	9.7
Ethnicity	Caucasian	174	77.0
	African American	11	4.9
	Asian	5	2.2
	Latino/a	23	10.2
	Other	13	5.8

Note: $N = 226$

Once data collection was completed with a final sample size of N=226, the data were exported to an Excel (Microsoft, 2011) spreadsheet for secure storage in a password-protected document on the primary investigator's computer. Out of 1000

recruitment emails sent, 247 students responded (24.7% response rate). Of those that responded, 21 students dropped out of the study prior to completion, leaving a final sample size of $N = 226$. No identifying information of participants was included in the Excel spreadsheet. The data were then exported to SPSS version 20 (IBM Corp., 2013), where it was organized and reverse coded when needed. All emails gathered from participants who wished to participate in the drawing for an Amazon gift card were gathered through the secure Qualtrics (2015) server. The primary investigator selected three participants to receive the gift cards through random drawing. Each winning participant was emailed a code to redeem their gift card.

Instrumentation

To measure adaptive/maladaptive perfectionism, self-compassion, shame, and depression, the researcher used four self-report surveys: The Perfectionism Inventory (Hill et al., 2004); Self-Compassion Scale – Short Form (SCS – SF; Raes et al., 2011); and the Experience of Shame Scale (ESS; Andrews et al., 2002). To measure depression the Patient Health Questionnaire – 9 was used (PHQ-9; Kroenke et al., 2001).

The Perfectionism Inventory

The Perfectionism Inventory (PI; Hill et al., 2004) was designed to measure perfectionism and its two higher order factors: adaptive (conscientious perfectionism) and maladaptive perfectionism (self-evaluative perfectionism). The PI is a 59-item questionnaire that yields three composite scores: overall perfectionism, conscientious perfectionism (adaptive), and self-evaluative perfectionism (maladaptive). The PI is comprised of eight subscales with items measured on a five-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). The Concern Over Mistakes subscale (8

items) includes statements such as “If I make mistakes, people might think less of me,” and “I am particularly embarrassed by failure.” The High Standards for Others subscale (7 items) is comprised of statements like “I’m often critical of others,” and I usually let people know when their work isn’t up to my standards.” The Need for Approval subscale (8 items) includes statements such as “I am over-sensitive to the comments of others,” and “I compare my work to others and often feel inadequate.” The Organization subscale (8 items) has statements like “I am well organized,” and “I think things should be put away in their place.” The Perceived Parental Pressure subscale (8 items) is comprised of statements such as “my parents hold me to high standards,” and “My parent(s) are difficult to please.” The Planfulness subscale (7 items) includes statements like “I find myself planning many of my decisions,” and “I usually don’t make decisions on the spot.” The Rumination subscale (7 items) has items such as “I often obsess over some things I have done,” and “If I make a mistake, my whole day is ruined.” Last, The Striving for Excellence subscale (6 items) includes items such as “I can’t stand to do something halfway,” and “I have to be the best in every assignment I do” (Hill et al., 2004).

The scores derived from the eight subscales provide the scores for the two higher order factors of the PI: Conscientious Perfectionism (adaptive perfectionism) and Self-Evaluative Perfectionism (maladaptive perfectionism), while the sum of all eight subscale provide the overall PI composite score (Hill et al., 2004). Specifically, scores from the High Standards for Others, Organization, Planfulness, and Striving for Excellence subscales make up Conscientious Perfectionism with higher score equating to higher levels of Conscientious (adaptive) Perfectionism; and scores from the Concern over

Mistakes, Need for Approval, Perceived Parental Pressure, and Rumination subscales make up Self-Evaluative Perfectionism with higher scores equating to higher levels of Self-Evaluative (maladaptive) perfectionism. Higher scores on the composite PI scale represent higher levels of overall perfectionism. No items are reverse coded.

An exploratory principal components analysis conducted in Hill et al. (2004) study confirmed a two-factor structure of the PI; loading on the first component (Conscientious Perfectionism) were Organization (.99), Striving for Excellence (.70), Planfulness (.67), and High Standards for Others (.49); and loading on the second component (Self-Evaluative Perfectionism) were Concern Over Mistakes (.93), Need for Approval (.89), Rumination (.80), and Perceived Parental Pressure (.38). While the loading value for Perceived Parental Pressure is lower than other scales, it still loaded more on Self-Evaluative Perfectionism than on Conscientious Perfectionism.

Convergent validity of the PI was found with its association with relevant subscales on the MPS-HF and MPS-F in a sample of 616 undergraduate students (*Mean* age = 18.9; *SD* 1.7). Overall, the Conscientious Perfectionism factor was associated with the self-oriented perfectionism subscale (.71) of Hewitt and Flett's (1991b) MPS, and the personal standards (.70) and organization (.76) of Frost et al., (1990) MPS (Hill et al., 2004), which was expected given self-oriented perfectionism, personal standards, and organization measure adaptive perfectionism (Beiling et al., 2004). Self-Evaluative Perfectionism had strong positive correlations with socially-prescribed perfectionism (.74) of Hewitt and Flett's (1991b) MPS, and concerns over mistakes (.78), and doubts about action (.67) of Frost et al., (1990) MPS. Again, these correlations were expected since socially-prescribed perfectionism, concerns over mistakes, and doubts about action

measure maladaptive perfectionism (Beiling et al., 2004). These results support the use of the PI in accurately measuring the two factors of perfectionism. Lastly, the PI accounts for more variance in scores and has higher predictive power in 59 items, than the combined 90 items of both MPS scales (Hill et al., 2004).

Psychometric support for the PI has been demonstrated across several studies. The norming sample of the PI consisted of 250 undergraduate students with a mean age of 18.9 years (SD 2.6; 63% women, 28% men, 93% Caucasian, 7% African American) (Hill et al., 2004). Cronbach's alpha for the norming sample was as follows: Concern Over Mistakes (.86), High Standards for Others (.83), Organization (.91), Perceived Parental Pressure (.88), Planfulness (.86), Rumination (.87), Striving for Excellence (.85), Conscientious Perfectionism (.75), Self-Evaluative Perfectionism (.79), and overall PI Composite (.83). The test-retest reliability across 3 and six-week intervals ranged from .71-.91 (Hill et al., 2004). In a study by Hill et al., (2010), the Cronbach's alpha for Conscientious Perfectionism and Self-Evaluative Perfectionism were .92 and .94 respectively in a sample of 216 undergraduate students with a mean age of 19.87 (SD = 1.41; 92% Caucasian, 3.2% African-American). Another study with a sample of 616 undergraduate students with a mean age of 18.9 years (62% female, 29% males, 95% Caucasian, 5% African American or Other) had an overall Cronbach's alpha for the entire PI of .95. (Broman-Fulks, Hill, & Green, 2008). Overall, the PI has demonstrated adequate validity and reliability across studies and was used to measure adaptive and maladaptive perfectionism in the current study.

Self-Compassion Scale – Short Form

The Self-Compassion Scale – Short Form (SCS-SF; Raes et al., 2011) was developed based on the original Self-Compassion Scale (SCS; Neff, 2003a); therefore, the norming of the SCS is discussed to review the norming data that supported the development of the SCS-SF. The SCS was designed to measure the three main components of self-compassion: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. The SCS is comprised of 26-items and six subscales (self-kindness, self-judgment, common humanity, isolation, mindfulness, and over identification).

Confirmatory factor analysis (CFA) of these constructs found six separate second-order factors that measure the high-order factor of self-compassion (Neff, 2003a; Neff 2015). Convergent validity was found using Pearson correlation coefficients between the SCS and other scales that measure similar constructs defined in Self-Compassion (i.e. self-criticism, social connectedness; emotional intelligence). Specifically, the SCS had a negative correlation (-.65) with the Self-Criticism subscale of the Depressive Experience Questionnaire, a positive correlation (.41) with Social Connectedness; and Attention (.11), Clarity (.43), and Repair (.55) of emotional intelligence. All correlations were found to be statistically significant, and while these correlations were not considered high, it shows it is measuring more than just self-acceptance, social connectedness, and emotional intelligence. It is important to note that the SCS did not correlate with a social desirability measure, ensuring that responses do not represent social attractiveness (Neff, 2003a).

Internal consistency reliability for the six factors on the original SCS in a sample of 391 undergraduate students (166 men, 225 women, mean age = 20.91, *SD* = 2.27; 58% White, 21% Asian, 11% Hispanic, 4% Black, and 6% Other) was as follows: .78 (self-kindness), .77 (self-judgment), .80 (common humanity), .79 (isolation), .75 (mindfulness), and .81 (over-identification) (Neff, 2003a). The internal consistency reliability for the entire SCS was .92. The strong psychometric properties of the original scale, allowed for the development of the shorter version of the SCS (Neff, 2003a).

The SCS-SF, which was used in this study, was developed by Raes et al., (2011) and consists of 12 items measured on a Likert scale. The Likert scale ranges from 1 *Never* to 5 *Always*, with a middle score of 3 *Sometimes*. The items in the SCS-SF were taken from the original SCS. The two items with the highest correlation to its corresponding subscale in the original SCS were included in the SCS-SF. There are two items per subscale and include statements such as "I try to be understanding and patient towards those aspects of my personality I don't like" and "I try to see my failings as part of the human condition" (Raes et al., 2011). Items 1, 4, 8, 9, 11, and 12 were reversed scored with higher scores being associated with higher levels of self-compassion.

As the SCS-SF was designed to be a more economically friendly version of the original SCS, convergent validity was examined through its correlation with the original SCS. In the third norming sample that consisted of 415 undergraduates in the United States, the SCS-SF had a near perfect correlation with the SCS (.98). The high correlation indicates it is measuring the same construct measured by the original SCS. Furthermore, similar to the original SCS, factor validation found a CFI of .97 for a six-factor model in SCS-SF (Raes et al., 2011).

The SCS-SF was normed on two Dutch samples followed by a third English-speaking (North American) sample. The first two samples consisted of 402 Dutch undergraduate students from a University in Belgium with the purpose to develop and validate a Dutch version of the SCS-SF. The third sample consisted of 415 students from the University of Texas in Austin with the intention to develop and validate an English version of the SCS-SF. Demographic information of the third sample included: 272 women, 143 men; average age was 10.62 years (*SD*=1.74); 53.5% Caucasian, 7% Asian American, 5.3% Mixed ethnicity, 1.7% Foreign, .7% American Indian, and 4.3% other. The internal consistency reliability for each subscale on the short form with the American sample was: self-kindness (.54), self-judgment (.63), common humanity (.62), isolation (.68), mindfulness (.69), and over-identification (.75). The internal consistency reliability for the entire SCS-SF for the three samples was .86. Due to the poor internal consistency reliabilities for each subscale, it is not recommended that individual subscales be interpreted (Raes et al., 2011) and therefore individual subscales were not interpreted in this study. Overall, the SCS-SF adequately measures the construct of self-compassion. Since it was beyond the purpose of this study to examine the impact of each individual factor of Self-Compassion in relation to the other constructs being measures, the SCS-SF was used to provide an overall score of self-compassion.

The Experience of Shame Scale

The Experience of Shame Scale (ESS; Andrews et al., 2002) is a 25-item scale that was designed to measure characterological, behavioral, and bodily shame, and was used to measure shame for the purposes of this study. Confirmatory factor analysis supports three higher order factors; 1) four areas for the characterological shame factor

(12 items): shame of personal habits, manner with others, sort of person (you are), and personal ability; 2) three areas of behavioral shame factor (9 items): shame about doing something wrong, saying something stupid, and failure in competitive situations; 3) and one area of bodily shame (4 items). Within each factor questions cover an experiential component about feeling shame, a cognitive component regarding concern about other's opinions, and a behavioral component about avoidance.

Characterological shame includes questions like, "Have you felt ashamed about the person you are?" and "Have you worried about what other people think of your ability to do things?" behavioral shame includes questions like, "Have you tried to cover up or conceal things you felt ashamed of having done?" and bodily shame includes questions like, "have you avoided looking at yourself in the mirror?" (Andrews et al., 2002, pp. 41-42). Two alternative items ("Have you felt ashamed when you failed at something which was important to you?" and "Have you worried about what other people think of you when you fail?") can be used in place of "Have you felt ashamed when you failed in a competitive situation?" and "Have you worried about what other people think of you when you failed in a competitive situation?" with populations where competitiveness is not important. Since the targeted population for this study is not exclusive to athletes, the alternative items were used. Responses were recorded on a 4-point Likert scale from 1 *Not at all* to 4 *Very much*. No items were reversed scored and higher scores are associated with higher levels of shame.

To establish convergent and construct validity, the ESS was correlated with the TOSCA shame scale with a correlation of .61. The TOSCA provides scenarios in which the participant is to rate how much shame they think they would experience while the

ESS measures current levels of shame. This difference may explain the moderate correlation between the ESS and TOSCA. Convergent validity was found between the ESS and the TOSCA guilt subscale with a correlation of .23, supporting the construct definition that guilt and shame are in fact two separate constructs and the ESS is measuring shame.

Strong psychometric properties have been established and have held across studies (Andrews et al., 2002; Matos & Pinto-Gouveia, 2010). The ESS was normed on 163 undergraduate students from the University of London College. The demographic information is as follows: mean age was 23.9 (*SD* = 6.2) and ranged from 19-48; 82% were women; variation in ethnicity was not provided. The internal consistency reliability for the sample was .92 with test-retest reliability after an 11-week period of .83. The internal consistency reliability for each scale was as follows: .90 (characterological shame), .87 (behavioral shame), and .86 (bodily shame). The test-retest reliability for the sample over 11 weeks for each subscale was .78, .74, and .82 respectively (Andrews et al., 2002). A study with a sample of 256 North American women used the ESS to measure shame and had a Cronbach's alpha of .96 (Resick et al., 2008). Similarly, a study in Canada had a sample of 75 men and women undergraduate students and had a Cronbach's alpha of .92 (Kelly, Zuroff, & Shapira, 2009). As evident, the psychometric properties of the ESS have held up across United Kingdom, Canadian, and United States cultures (Andrews et al., 2002; Kelly et al., 2009; Resick et al., 2008).

Patient Health Questionnaire-9

The Patient Health Questionnaire – 9 (PHQ-9; Kroenke et al., 2001) was used in this study to measure depression symptoms. The PHQ-9 was derived from the Patient

Health Questionnaire (PHQ) and is the depression component of the PHQ. The PHQ-9 is a 9-item self-report questionnaire that measures symptoms of depression based on the DSM-IV criteria. Participants rate statements such as "feeling tired or having little energy" and "feeling down, depressed, or hopeless" on a four point Likert scale between 0 *Not at all* and 3 *Nearly every day*. No items are reverse coded and scores are added together for an overall score that represents the severity and frequency of depressive symptoms. While the PHQ-9 is a continuous measure of depression, the following thresholds 5, 10, 15, and 20 are "easy-to-remember thresholds demarcating the lower limits of mild, moderate, moderately severe, and severe depression" (Kroenke et al., 2001). The PHQ-9 takes about five minutes to complete and can be administered in both paper/pencil and online format (Instructional, n.d.; Eisenberg, et al., 2011).

To establish criterion validity of the PHQ-9, participants were interviewed by a mental health professional that identified whether the participant qualified for a diagnosis of depression. Results found a positive correlation between PHQ-9 scores and a diagnosis of major depression (Kroenke et al., 2001). The correlation of the PHQ-9 and the Medical Outcomes Study Short-Form General Health Survey (SF-20) was examined with the PHQ-9 having the strongest correlation with the Mental Health subscale (.73) of the SF-20. Similarly, it had a correlation of .55 with General Health Perceptions, and .52 of Social Functioning. Further construct validity of the PHQ-9 was established with its correlations with disability days (.39), physician visits (.24), and symptom-related difficulty (.55). Last, external validity was established after these results were consistent across two studies, each with 3,000 participants.

The PHQ-9 was normed over two studies with a total of 6,000 participants (3,000 patients from a primary care for study 1) 3,000 patients from OBGYN for study 2). The internal consistency coefficient was .89 for the sample in study one and .86 for the sample in study two. A study by Eisenberg et al. (2011) used the PHQ-9 to measure symptoms of depression through an online format in their sample of college students. Their study adds further support to the psychometric properties of the PHQ-9 with and internal consistency coefficient of .84. Overall, the PHQ-9 has been used across multiple settings, with different populations, and has been translated into 47 different languages (Instructional, n.d.).

Research Design

The study was a non-experimental cross-sectional research design. The primary investigator used multiple hierarchical regression, as described by Baron and Kenny (1986), to examine the mediating effects of self-compassion and shame on the relationship between adaptive/maladaptive perfectionism and depression. This research design allowed for the investigation of how variables affect behavioral phenomena at a single moment in time (Gall, Gall, & Borg, 2007). Additionally, the behavioral variables examined in this study could not be meaningfully examined through a laboratory experimental design; and thus, supporting the use of correlational research as it allowed for the examination of real-world phenomena (Tabachnick & Fidell, 2007).

Several factors can be examined through correlation research, including the direction, strength, predictive power, and significance of the relationship between variables (Remler & Van Ryzin, 2010). To that end, the use of multiple hierarchical regression in this study allowed for the examination of the strength and significance of

the relationship between adaptive/maladaptive perfectionism, shame, self-compassion, and depression. The R^2 *change* was used to determine the effect size of each variable in the overall regression model, and standardized Beta values (β) were used to determine the strength and direction of the relationship between variables, therefore answering all research question proposed for this study.

Data Analysis

Prior to running the analyses to answer the research questions, the researcher conducted descriptive analyses to obtain the internal reliability of the measures for this study, as well as additional descriptive information (e.g., mean scores, standard deviation, ranges, correlation matrix). Next, the primary researcher checked for assumptions of regression analysis; the following assumptions needed to be met prior to conducting regression analysis: variables are independent of one another, variables are normally distributed, there is a linear relationship between predictors and outcome variable(s), variables are measured without error, and homoscedasticity. As recommended by Pedhazur (1997), the following steps were taken to test for the assumptions of multiple regression. The variance inflation factor (*VIF*) was used to assess for independence of variables or multicollinearity. A *VIF* greater than 10 indicated the presence of multicollinearity. Visual inspection of scatter plots was used to assess for linear relationship between predictors and outcome variable, and homoscedasticity. The data would meet the homoscedasticity assumption if all data points were equal distances from the fitted regression line (Pedhazur, 1997). Visual inspection of histograms with a normal fitted curve of the residuals in addition to the Shapiro-Wilkes test ($p < .05$ = data failed normality assumption) were used to assess whether the data were normally distributed.

Furthermore, skewness (expected to be 0), and kurtosis (expected to be less than 3) scores were also used to help assess whether the data were normally distributed. If the data failed to meet the required assumptions of normality, it is recommended to try various transformation techniques (i.e. log, square root, etc.) to determine if a better fit of the data could be met (Tabachnick, & Fidell, 2007). Using transformed data limits the interpretation of results and would need to be further discussed in the results section. Results of the aforementioned assumption tests are further discussed in Chapter IV.

In order to analyze the data, the researcher conducted multiple hierarchical regression analysis. Various researchers have suggested the use of multiple regression to test for mediating effects (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). There are four recommended steps to determine if a variable acts as a mediator: 1) confirm there is a signification relationship between perfectionism (adaptive and maladaptive) and the depression, 2) confirm perfectionism (adaptive and maladaptive) is related to the mediators (shame and self-compassion), 3) confirm that the mediators (shame and self-compassion) are related to depression, and 4) confirm that the relationship between perfectionism (adaptive and maladaptive) and depression has reduced after adding the mediators (shame and self-compassion) into the equation (Frazier et al., 2004).

Since several multiple regression analyses were ran with the same data, Bonferroni correction was used to help avoid making a Type I error. Desired significance level for the entire study is $\alpha = .05$; The Bonferroni correction lowered the significance level to .01 for each individual regression analysis (Pedhazer, 1997). The primary investigator examined values for *F, R,* R^2, R^2 *Change*, and *Beta coefficients* to determine statistical and clinical significance of the data. The R^2 *Change* was used to determine

change in effect size after predictors were added into the model; while *Beta coefficients* were examined to determine direction and strength of relationship between the predictors and outcome.

The current study had two continuous predictor variables (adaptive and maladaptive perfectionism) and two proposed mediating variables (self-compassion and shame). Demographic variables were treated as covariates and entered into all regression models first to control for their effects on depression. Following the four recommended steps in determining mediating effects, adaptive and maladaptive perfectionism were next entered into the model. To determine how much variance in depression was accounted for by adaptive and maladaptive perfectionism, R and R^2 were examined; and F was examined to determine if the relationship was statistically significant. Next, self-compassion and shame were entered into a separate regression model. To determine how much variance in depression was accounted for by self-compassion and shame R and R^2 *change* were examined; and F was examined to determine if the relationship was statistically significant.

In order to test for mediating effects, results from the first two regression models must show a significant relationship between, both predictors (adaptive/maladaptive perfectionism) and both mediators (self-compassion and shame) with depression. Once these relationships were established through the regression models stated above, adaptive and maladaptive perfectionism were entered into the second step of the regression model (step one demographic covariates). Next, self-compassion and shame were entered into the third step of the regression model. To see how much additional variance in depression (if any) was accounted for by the mediating variables, R, R^2, and R^2 *Change* were

interpreted. Beta weights and structure coefficients were examined to determine which mediating variable were more salient in their influence on depression. Furthermore, the strength of the relationship between adaptive/maladaptive perfectionism and depression were expected to be weakened after self-compassion and shame were entered into the model. *Beta coefficients* were examined to determine changes in the direction and strength of relationship between the adaptive/maladaptive perfectionism and depression.

According to Tabachnick and Fidell (2007), several factors were important to consider when determining sample size for a regression analysis: "desired power, alpha level, number of predictors, and expected effect size" (p. 123). Assuming a $\alpha = .05$, and $\beta = .20$, two equations were recommended by Tabachnick & Fidell (2007) in determining sample size; $N \geq 50 + 8m$ and $N \geq 104 + m$, where m equals the number of predictors in the model. This study included four predictors: maladaptive perfectionism, adaptive perfectionism, self-compassion, and shame. Therefore, based on both of these equations, $N \geq 50 + 8(4)$ and $N \geq 104 + 4$, the minimum sample size suggested were 82 and 108. To help verify the sample size found through the above equations the statistical program G-Power was used. With an effect size = .15, $\alpha = .05$, and power = .80, the estimated sample size for a multiple regression was $N = 85$. Based on the above findings and recommendations, the targeted minimum sample size was 108 participants, and therefore the obtained samples size of this study (N=226) was more than sufficient based on the above recommendations to answer the following research questions.

Hypotheses

The research questions and hypotheses used to guide this study were as follows:

Q1 Do the different forms of perfectionism (i.e., adaptive & maladaptive) help explain a significant amount of variance in depression?

H1 Maladaptive perfectionism explains a significant amount of variance in depression; as maladaptive perfectionism levels increase, so would depression levels.

H2 Adaptive perfectionism explains a significant amount of variance in depression; as adaptive perfectionism levels increase, depression levels would decrease.

Q2 Does self-compassion and shame explain a significant amount of variance in depression?

H1 Shame explains a significant amount of variance in depression; as shame levels increase, so would depression levels.

H2 Self-Compassion explains a significant amount of variance in depression; as self-compassion levels increase, depression levels would decrease.

Q3 Does maladaptive/adaptive perfectionism interact with self-compassion and shame to predict depression?

H1 Self-compassion interacts with maladaptive perfectionism to predict depression. As maladaptive perfectionism levels increase, self-compassion levels would decrease, and depression levels would increase. The direct relationship between maladaptive perfectionism and depression would be significantly weakened after controlling for the effects of self-compassion.

H2 Self-compassion interacts with adaptive perfectionism to predict depression. As adaptive perfectionism levels increase, self-compassion levels increase, and depression levels would decrease. The direct relationship between adaptive perfectionism and depression would be significantly weakened after controlling for the effects of self-compassion.

H3 Shame interacts with maladaptive perfectionism to predict depression. As maladaptive perfectionism levels increase, shame levels would increase; as shame levels increase, levels of depression would increase. The direct relationship between maladaptive perfectionism and depression would be significantly weakened after controlling for the effects of shame.

H4 Shame interacts with adaptive perfectionism to predict depression. As adaptive perfectionism levels increase, shame levels would decrease; as shame levels decrease, levels of depression would decrease. The direct relationship between adaptive perfectionism and depression would be significantly weakened after controlling for the effects of shame.

Summary

The purpose of this study was to examine whether self-compassion and shame mediate the relationship between perfectionism and depression. The procedures, measures, research design, and data analysis used in this study were discussed. Participants were gathered through convenience sampling from a university in the Rocky Mountain region and the sample consisted of N=226 students. Multiple hierarchical regression was used to answer all research questions. The effects of self-compassion and shame on intrapersonal and social functioning supported the use of correlational research and multiple regression analyses in order to examine if self-compassion and shame act as mediators.

CHAPTER IV

RESULTS

SPSS (version 20, Macintosh OS Sierra 10.12.2) was used to conduct all analyses. Due to the use of several regression models, a Bonferroni correction was conducted and indicated a significance level of .01 used to help prevent Type I error (Pedhazur, 1997). Therefore, a significance level of .01 was used to determine statistical significance for all analyses.

Descriptive Statistics and Preliminary Analysis

Cronbach's alpha (α), standard deviation, range, and mean of all measures are listed in Table 2. The internal consistency of all measures for the sample of this study (α) was high for all scales ($\geq$ .857). The high internal reliability of all measures used with the sample of this study and is above the recommended cutoff of .7 for research purposes (Field, 2013).

Table 2

Summary of The Perfectionism Inventory, Self-Compassion Scale – Short Form (SCS-SF), The Experience of Shame Scale (ESS), and Patient Health Questionnaire-9 (PHQ-9)

	Maladaptive Perfectionism[1]	Adaptive Perfectionism[1]	SCS-SF	ESS	PHQ-9
n	226	226	226	226	226
Mean (*SD*)	99.86 (25.75)	98.27 (16.86)	36.76 (8.17)	58.63 (19.13)	7.87 (6.72)
Range	37-153	49-135	18-56	25-100	0-26
α	.954	.909	.857	.966	.911

Note. [1]Subscales of the Perfectionism Inventory. *p < .01

Shapiro-Wilkes test, skewness and kurtosis values, and visual inspection of residual q-q plots, and scatterplots were examined to test for normality on the measures and residuals of the models. Skewness values for measures ranged from -.337 (adaptive perfectionism) to .932 (depression). The largest positive skew value of .932 indicates participants reported more low levels of depression. All other skew values indicate slight positive (shame .284) or negative (mal/adap perf -.180/-.337 and self-compassion -.042) skewness. Visual inspection of histograms supports these values.

The Shapiro-Wilkes value of residuals of all variables in the regression model was .987 and statistically significant ($p < .05$), meaning the residuals or error in the observed data were not normally distributed. While the normality assumption of multiple regression is robust and sensitive to small deviation from normality (Field, 2013), examination of the q-q plot for the residuals from the full regression model with the square root transformation of depression showed the transformed data met the normality of residuals assumption (Shapiro-Wilkes .995; $p > .05$). Therefore, the square root transformation of depression was used for analyses.

Variance inflation factor (*VIF*) values were used to assess multicollinearity. There was no *VIF* value greater than 10 indicating no predictor variable is highly correlated to another and no multicollinearity (Field, 2013). Visual inspection of scatterplots, and histograms of residuals showed no evidence of heteroskedasticity. Last, correlations between all continuous variables (maladaptive perfectionism, adaptive perfectionism, Experience of Shame Scale, Self Compassion Scale-Short Form, and Patient Health Questionnaire-9) were computed (see Table 3).

Table 3

Correlations Between the Maladaptive Perfectionism and Adaptive Perfectionism Indices of The Perfectionism Inventory, Experience of Shame Scale, Self-Compassion Scale – Short Form, and PHQ-9

	The Perfectionism Inventory		SCS-SF	ESS	PHQ-9
	Mal Perf	Ad Perf			
Mal Perf	--	.394*	-.697*	.707*	.465*
Ad Perf		--	-.089	.118	-.028
SCS-SF			--	-.706*	-.570*
ESS				--	.603*
PHQ-9					--

Note. $*p < .01$; Mal Perf = Maladaptive Perfectionism, Ad Perf = Adaptive Perfectionism, ESS = Experience of Shame Scale, SCS-SF = Self-Compassion Scale, Short Form, PHQ-9 = Patient Health Questionnaire.

Multiple Linear Regression Analysis

Multiple regression was used to test the four conditions required for mediation: 1) the predictor variables (maladaptive and adaptive perfectionism) must significantly predict the outcome variable (depression); 2) the predictor variables (maladaptive and adaptive perfectionism) must significantly predict the mediator variables (shame and self-compassion); 3) the mediator variables (shame and self-compassion) must significantly predict the outcome variable (depression); 4) the predictor variables (maladaptive and adaptive perfectionism) must have less predictive power of the outcome variable (depression) after including the mediating variables (shame and self-compassion) (Baron & Kenny, 1986; Frazier et al., 2004). This study used these steps to assess for mediation effects while controlling for the effects of demographic variables (age, gender, race, and level of education). Race and level of education were effect coded prior to being entered in the regression model and are represented in all tables as vectors. All demographic variables were entered into the regression models in the first step so the effects could be controlled for on the predictor and mediating variables.

The first condition assessed was the predictive power of maladaptive/adaptive perfectionism on depression (see Table 4). The adjusted R^2 value indicates all demographic variables, maladaptive perfectionism, and adaptive perfectionism accounted for 29.3% (R = .570) of the variance in depression. The *R square change* value indicated that 23.4% of that variance in depression was uniquely accounted for by maladaptive/adaptive perfectionism. When looking at the impact of maladaptive (β = .540, $p < .001$) and adaptive perfectionism (β = -.255, $p < .001$), the regression model showed both variables were significant predictors of depression at the .001 level.

Of note, results from the correlation matrix showed adaptive perfectionism is only significantly correlated with maladaptive perfectionism and not with any other predictor variable or the dependent variable, yet results found it is a significant predictor of depression, self-compassion, and shame in all regression models. This discrepancy indicates the possibility that adaptive perfectionism is acting as a suppressor variable and accounting for irrelevant variance in the regression model that is actually attributed by maladaptive perfectionism. Smith, Ager, and Williams (1992) describe a suppressor variable as when a predictor variable is not correlated with the criterion (depression) but is correlated with one or more predictor variables (maladaptive perfectionism), and is appearing as a significant predictor of the criterion (depression). Further post-hoc analyses were examined to confirm this finding and discussed further later in this chapter, however, the remaining findings need to be read and interpreted with this caveat in mind. The implications of adaptive perfectionism acting as a suppressor variable are discussed further in Chapter V.

Table 4

Hierarchical Regression Results for Model Explaining Maladaptive/Adaptive Perfectionism and Depression.

Explanatory Variable	*B*	SE *B*	*β*	*t* value	*p* value	Adj R^2	*F* change
Step 1						.058	2.703*
Age	-.031	.011	-.238	-2.892	.004*		
Gender	.373	.206	.121	1.812	.071		
Ed 1	.028	.155	.014	.182	.856		
Ed 2	.070	.165	.030	.426	.671		
Eth 1	-.010	.192	-.004	-.050	.960		
Eth 2	.087	.345	.022	.252	.801		
Eth 3	-.855	.522	-.180	1.637	.103		
Eth 4	.095	.269	.029	.354	.724		
Step 2						.293	36.693**
Mal Perf	.027	.003	.540	8.525	.000**		
Ad Perf	-.020	.005	-.255	-4.040	.000**		

Note: N = 226. *p < .01 **p < .001; Ed 1 & Ed 2 = Effect Coding of Level of Education, Eth1, Eth2, Eth 3, & Eth4 = Effect Coding of Ethnicity; Mal Perf = Maladaptive Perfectionism, Ad Perf = Adaptive Perfectionism

The second condition assessed was the predictive power of maladaptive/adaptive perfectionism on shame and self-compassion. In regards to the predictive power of maladaptive/adaptive perfectionism on shame (see Table 5) the adjusted R^2 value indicates all demographic variables, maladaptive perfectionism, and adaptive perfectionism accounted for 53.2% (R = .743) of the variance in shame. The *R square change* value indicated that 50.9% of the variance in shame was uniquely accounted for by maladaptive/adaptive perfectionism. When looking at the impact of maladaptive (β = .794, p < .001) and adaptive perfectionism (β = -.206, p < .001), the regression model showed both variables were significant predictors of shame at the .001 level. However, due to the discrepancy between the correlation between adaptive perfectionism and shame and results from the regression model, adaptive perfectionism may be acting as a suppressor variable.

Table 5

Hierarchical Regression Results for Model Explaining Maladaptive/Adaptive Perfectionism and Shame

Explanatory Variable	*B*	SE *B*	*β*	*t* value	*p* value	Adj R^2	*F* change
Step 1						.008	1.236
Age	-.298	.161	-.156	-1.844	.067		
Gender	7.397	3.105	.163	2.382	.018		
Ed 1	-1.222	2.334	-.043	-.524	.601		
Ed 2	1.134	2.482	.033	.457	.648		
Eth 1	1.893	2.892	.056	.655	.513		
Eth 2	-2.752	5.198	-.047	-.529	.597		
Eth 3	-2.957	7.869	-.042	-.376	.707		
Eth 4	-.506	4.058	-.011	-.125	.901		
Step 2						.532	120.534*
Mal Perf	.591	.038	.794	15.393	.000*		
Ad Perf	-.233	.058	-.206	-4.009	.000*		

Note: N = 226. *$p < .001$; Ed 1 & Ed 2 = Effect Coding of Level of Education, Eth1, Eth2, Eth 3, & Eth4 = Effect Coding of Ethnicity; Mal Perf = Maladaptive Perfectionism, Ad Perf = Adaptive Perfectionism

In regards to the predictive power of maladaptive/adaptive perfectionism on self-compassion (see Table 6), the adjusted R^2 value indicates all demographic variables, maladaptive perfectionism, and adaptive perfectionism accounted for 52.2% ($R = .737$) of the variance in self-compassion. The *R square change* value indicates that 49.5% of the variance in self-compassion was uniquely accounted for by maladaptive/adaptive perfectionism. When looking at the impact of maladaptive ($\beta = -.786$, $p < .001$) and adaptive perfectionism ($\beta = .225$, $p < .001$), the regression model showed both variables were significant predictors of self-compassion at the .001 level. However, due to the discrepancy between the correlation between adaptive perfectionism and self-compassion and results from the regression model, adaptive perfectionism may be acting as a suppressor variable.

Table 6

Hierarchical Regression Results for Model Explaining Maladaptive/Adaptive Perfectionism and Self-Compassion

Explanatory Variable	*B*	SE *B*	*β*	*t* value	*p* value	Adj R^2	*F* change
Step 1						.012	1.344
Age	.161	.069	.197	2.335	.020		
Gender	-1.736	1.328	-.089	-1.307	.192		
Ed 1	.195	.998	.016	.196	.845		
Ed 2	-.784	1.061	-.053	-.739	.461		
Eth 1	.645	1.236	.045	.521	.603		
Eth 2	-1.360	2.222	-.055	-.612	.541		
Eth 3	.317	3.364	.011	.094	.925		
Eth 4	1.898	1.735	.093	1.094	.275		
Step 2						.522	114.927*
Mal Perf	-.251	.017	-.786	-15.083	.000*		
Ad Perf	.109	.025	.225	4.346	.000*		

Note: N = 226. *$p < .001$; Ed 1 & Ed 2 = Effect Coding of Level of Education, Eth1, Eth2, Eth 3, & Eth4 = Effect Coding of Ethnicity; Mal Perf = Maladaptive Perfectionism, Ad Perf = Adaptive Perfectionism

The third condition assessed was the predictive power of shame and self-compassion on depression (see Table 7). The adjusted R^2 value indicates all demographic variables, shame, and self-compassion accounted for 41.8% ($R = .666$) of the variance in depression. The *R square change* value indicated that 35.2% of the variance in depression was uniquely accounted for by self-compassion and shame. When looking at the impact of self-compassion ($\beta = -.269$, $p < .001$) and shame ($\beta = .386$, $p < .001$), the regression model showed both variables were significant predictors of depression at a .001 significance level.

Table 7

Hierarchical Regression Results for Model Explaining Self-Compassion, Shame, and Depression

Explanatory Variable	*B*	SE *B*	*β*	*t* value	*p* value	Adj R^2	*F* change
Step 1						.058	2.703*
Age	-.031	.011	-.238	-2.892	.004*		
Gender	.373	.206	.121	1.812	.071		
Ed 1	.028	.155	.014	.182	.856		
Ed 2	.070	.165	.030	.426	.671		
Eth 1	-.010	.192	-.004	-.050	.960		
Eth 2	.087	.345	.022	.252	.801		
Eth 3	-.855	.522	-.180	-1.637	.103		
Eth 4	.095	.269	.029	.354	.724		
Step 2						.418	67.153**
Self-Comp	-.043	.012	-.269	-3.617	.000**		
Shame	.026	.005	.386	5.207	.000**		

Note: N = 226. *p < .01 **p < .001; Ed 1 & Ed 2 = Effect Coding of Level of Education, Eth1, Eth2, Eth 3, & Eth4 = Effect Coding of Ethnicity; Self-Comp = Self-Compassion

Finally, the last condition assessed was the change in the predictive power of maladaptive/adaptive perfectionism on depression when including self-compassion and shame in the regression model (see Table 8). The adjusted R^2 value indicates all demographic variables, maladaptive perfectionism, adaptive perfectionism, shame, and self-compassion accounted for 45.5% (R = .675) of the variance in depression. The *R square change* value indicated that 23.4% of the variance in depression was uniquely accounted for by maladaptive and adaptive perfectionism, while and additional 13% was uniquely accounting for by shame and self-compassion, both of which were statistically significant (p < .001). When looking at the impact of maladaptive perfectionism (β = .035, p = .707) and adaptive perfectionism (β = -.118, p = .051), the regression model showed both variables were no longer significant predictors of depression when self-compassion (β = -.257, p = .002) and shame (β = .382, p < .001) were included in the model, whereas both shame and self-compassion remained significant predictors of

depression. However, due to the discrepancy between the correlations between adaptive perfectionism and shame, self-compassion, and depression, and results from the regression models, adaptive perfectionism may be acting as a suppressor variable.

Table 8

Hierarchical Regression Results for Model Explaining Maladaptive Perfectionism, Adaptive Perfectionism, Self-Compassion, Shame, and Depression

Explanatory Variable	*B*	SE *B*	*β*	*t* value	*p* value	Adj R^2	*F* change
Step 1						.058	2.703*
Age	-.031	.011	-.238	-2.892	.004*		
Gender	.373	.206	.121	1.812	.071		
Ed 1	.028	.155	.014	.182	.856		
Ed 2	.070	.165	.030	.426	.671		
Eth 1	-.010	.192	-.004	-.050	.960		
Eth 2	.087	.345	.022	.252	.801		
Eth 3	-.855	.522	-.180	-1.637	.103		
Eth 4	.095	.269	.029	.354	.724		
Step 2						.424	24.997**
Mal Perf	.002	.005	.035	.376	.707		
Ad Perf	-.009	.005	-.118	-1.960	.051		
Self- Comp	-.041	.013	-.257	-3.149	.002*		
Shame	.026	.006	.382	4.627	.000**		

Note: N = 226. *$p < .01$ **$p < .001$; Ed 1 & Ed 2 = Effect Coding of Level of Education, Eth1, Eth2, Eth 3, & Eth4 = Effect Coding of Ethnicity; Mal Perf = Maladaptive Perfectionism, Ad Perf = Adaptive Perfectionism; Self-Comp = Self-Compassion

Suppressor Variable – Post Hoc Analyses

There are several ways to identify a suppressor variable, with no clear consensus within the field of statistics of which is the best or preferred method (Ludlow & Klein, 2014). To examine the possibility that adaptive perfectionism was acting as a suppressor variable several post-hoc regression analyses omitting the maladaptive perfectionism variable from the regression models, which was the only variable adaptive perfectionism was significantly correlated. Results indicated that when maladaptive perfectionism was excluded from the model, adaptive perfectionism was no longer a significant predictor of

shame, self-compassion, or depression (see Table 9). Suppressor variables can also be identified when the absolute value of the partial correlation is "considerably larger" than the absolute value of the zero-order correlation (Ludlow & Klein, 2014, p. 20). The implications of adaptive perfectionism acting as a suppressor variable are further discussed in Chapter V.

Table 9

Post Hoc Hierarchical Regression Results for Model Explaining Adaptive Perfectionism, Self-Compassion, Shame, and Depression

Explanatory Variable	*β*	*t* value	*p* value	Adj R^2	*F* change
IV: Ad Perf					
Mediators: SC and Shame					
DV: Depression					
Step 1 - Demographics				.058	2.703*
Step 2				.426	69.774**
Ad Perf	-.107	-2.033	.043		
Self- Comp	-.270	-3.660	.000**		
Shame	.396	5.361	.000**		
IV: Ad Perf					
DV: SC					
Step 1 – Demographics				.012	1.344
Step 2				.013	1.148
Ad Perf	-.074	-1.072	.285		
IV: Ad Perf					
DV: Shame					
Step 1 – Demographics				.008	1.236
Step 2				.013	1.958
Ad Perf	.096	1.399	.163		

Note: N = 226. *p < .01 **p < .001; Demographics = age, gender, ethnicity, and level of education; Ad Perf = Adaptive Perfectionism; Self-Comp = Self-Compassion

Research Question One

It was hypothesized that maladaptive and adaptive perfectionism explain a significant amount of variance in depression; specifically, as maladaptive perfectionism increased, depression levels would increase, and as adaptive perfectionism increased

depressive levels would decrease. Results found maladaptive perfectionism was positively correlated with depression (r = .465) and the Beta weight for maladaptive perfectionism (β = .540, p < .001) in the regression model with depression showed a positive relationship, meaning as maladaptive perfectionism levels increased, so did depressive levels. Interestingly, adaptive perfectionism appeared to be a significant predictor of depression (β = -.255, p < .001), however when taking into the account its lack of correlation with depression (r = -.028) and only found to be significantly correlated with maladaptive perfectionism (r = .394), it appears adaptive perfectionism may be acting as a suppressor variable in this regression model. A post hoc regression analysis of adaptive perfectionism on depression while omitting maladaptive perfectionism found that adaptive perfectionism was no longer a significant predictor of depression (β = -.049, p = .466). Therefore, these findings support part of the proposed hypothesis; specifically, maladaptive perfectionism explained a significant amount of variance in depression, while adaptive perfectionism does not appear to be a significant predictor of depression but may be acting as a suppressor variable in the proposed regression model.

Research Question Two

It was hypothesized that shame and self-compassion explain a significant amount of variance in depression. Specifically, that as shame levels increased, the level of depression would increase as well; and conversely, as self-compassion levels increased, level of depression decreased. Correlation results support the hypothesized relationship between shame, self-compassion and depression; specifically, shame had a positive correlation (r = .603) and self-compassion had a negative correlation (r = -.570).

Furthermore, the Beta weights in the regression model including self-compassion (β = -.269, p < .001) and shame (β = .386, p < .001) on depression support these hypotheses. As self-compassion levels increased, depression levels decreased, and as shame levels increased, depression levels increased.

Research Question Three

The final research question hypothesized self-compassion and shame would mediate the relationship between adaptive/maladaptive perfectionism and depression. Table 11 provides the analysis and steps necessary to test for mediation. The hypothesized relationship proposed, as maladaptive perfectionism increased, shame would increase, self-compassion would decrease, and depression levels would increase. Similarly, as adaptive perfectionism increased, shame would decrease, self-compassion would increase, and depression levels would decrease. Finally, for shame and self-compassion to be considered mediators, the predictive ability of maladaptive/adaptive perfectionism on depression needed to significantly decrease. Findings support part of the proposed hypotheses.

Table 10

Testing Mediating Effects of Shame and Self-Compassion Using Multiple Regression

Testing Steps	*B*	SE *B*	*β*
Step 1			
Outcome: Depression			
Predictors:			
Mal Perf	.027	.003	.540**
Ad Perf	-.020	.005	-.255**
Step 2a			
Outcome: Shame			
Predictors:			
Mal Perf	.591	.038	.794**
Ad Perf	-.233	.058	-.206**
Step 2b			
Outcome: Self-Comp			
Predictors:			
Mal Perf	-.251	.017	-.786**
Ad Perf	.109	.025	.225**
Step 3			
Outcome: Depression			
Mediators:			
Self-Comp	-.041	.013	-.257*
Shame	.026	.006	.382**
Predictors:			
Mal Perf	.002	.005	.035
Ad Perf	-.009	.005	-.118

Note: N = 226. *$p < .01$, ** $p < .001$

When not including shame and self-compassion in the regression model, maladaptive perfectionism explained a significant amount of variance in depression ($\beta = .540$, $p < .001$). When shame and self-compassion were included in the regression model, maladaptive perfectionism no longer explained a significant part of variance in depression ($\beta = .035$, $p = .707$); while shame ($\beta = .382$, $p < .001$) and self-compassion ($\beta = -.257$, $p = .002$) were still significant predictors. These results support the hypothesis that self-compassion and shame act as full mediators between maladaptive perfectionism and depression. Furthermore, the Beta weights support the proposed positive

(maladaptive perfectionism, shame, and depression) and negative (self-compassion and maladaptive perfectionism/depression) relationships. As maladaptive perfectionism increases, shame increases, self-compassion decreases, and depressive symptoms increase.

When not including shame and self-compassion in the regression model, adaptive perfectionism appeared to explain a significant amount of variance in depression (β = -.255, $p < .001$). Results from post hoc analyses indicate that adaptive perfectionism appeared to be acting as a suppressor variable in the regression model. When maladaptive and adaptive perfectionism are entered into the regression model simultaneously, adaptive perfectionism is accounting for irrelevant variance attributed by maladaptive perfectionism and not variance of depression (Smith et al., 1992). Therefore, test of significant mediating effects are only reported for maladaptive perfectionism on depression.

Test of Significant Mediation

To test whether the amount of change of between the direct effect (maladaptive perfectionism (B = .27) on depression) and indirect effect (maladaptive perfectionism (B = .002) on depression after including shame and self-compassion) were significant, a test of significance proposed by Kenny, Kashy, and Bolger (1998) was conducted. Since the direct effect is equal to the product of the indirect (mediated) effects, dividing the product of the mediated effects by a standard error term can test significance. The standard error term was calculated using a formula proposed by (Baron & Kenny, 1986) and is described as the square root of $b^2sa^2 + a^2sb^2 + sa^2sb^2$, where a and b are the unstandardized regression coefficients while sa and sb are their error terms. The indirect

or mediated effect divided by the standard error score provides a *z* score. A *z* score greater than 2.33 is significant at the .01 level. Based on these criteria, Table 12 provides the formula and results of significance. Results indicate the change from the direct effect of maladaptive perfectionism on depression to the mediated effect of shame and self-compassion (B = .27 to B = .002) was statistically significant meaning shame and self-compassion were significant full mediators in the relationship between maladaptive perfectionism and depression.

Table 11

Tests of Mediation Significance

	Formula	SE	*z* score
Mal Perf	SE = $\sqrt{(b_1^2\, sa_1^2 + a_1^2 sb_1^2 + sa_1^2 sb_1^2 + b_2^2 sa_2^2 + a_2^2 sb_2^2 + sa_2^2 sb_2^2)}$		
	SE = $\sqrt{.026^2(.038^2) + .591^2(.006^2) + .038^2(.006^2) + -.041^2(.017^2) + -.251^2(.013^2) + .017^2(.013^2)} = .005$	.005	
	Test of Significance = $SE/a_1b_1+a_2b_2$		
	z score = .005/[.591(.026) + -.251(-.041)] = 5		5*

Note: SE = Standard Error. *a* and *b* = unstandardized regression coefficients; *sa* and *sb* = standard error term. Mal Perf: a_1 = mal perf → shame; b_1 = shame → dep; a_2 = mal perf → self-comp; b_2 = self-comp → dep.* $p < .001$.

Summary

In order to answer the research questions of this study, the primary researcher ran hierarchical multiple regressions to examine the mediating effects of self-compassion and shame on the relationship between adaptive and maladaptive perfectionism. Prior to answering the research questions, assumptions of multiple regression were checked and all assumptions were met with the exception of normality of residuals. The square root transformation of the depression variable showed a better fit of the data and met the

normality of residuals assumption. Therefore, all analyses were run with the square root transformed depression data. Results from a bivariate correlation analysis found all variables were significantly correlated with each other, with the exception of adaptive perfectionism, which was only correlated with maladaptive perfectionism and not with the dependent variable depression.

Results from the multiple regression analyses found shame and self-compassion were significant full mediators in the relationship between maladaptive perfectionism and depression. Furthermore, results of the regression analyses also showed a significant mediating effect of shame and self-compassion on the relationship between adaptive perfectionism and depression; however, results from the bivariate correlation showed there was no relationship between adaptive perfectionism and depression for shame and self-compassion to mediate. To explain this discrepancy, post-hoc regression analyses were run and showed adaptive perfectionism was acting as a suppressor variable in this study. Meaning, the significant amount of variance of depression the results showed as being explained by adaptive perfectionism, it was actually irrelevant variance of maladaptive perfectionism (Smith et al., 1992). These findings indicate there is no relationship between adaptive perfectionism and depression for self-compassion and shame to mediate. Overall, part of the proposed hypotheses were supported in this study; shame and self-compassion act as full mediators in the relationship between maladaptive perfectionism and depression, while adaptive perfectionism acted as a suppressor variable.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

The World Health Organization (2015) reported depression as the leading cause of disability worldwide. While multiple factors can lead to depression, one factor, perfectionism, has been repeatedly found to have a strong positive correlation with depressive symptomology (Cheng et al., 2015; Enns et al., 2002; Limburg, Watson, Hagger, & Egan, 2016; Macedo et al., 2015; Malinowski et al., 2017). The purpose of this study was to identify possible mediating variables that help explain the relationship between adaptive and maladaptive perfectionism and depression in order to provide theoretical, treatment, and research implications. A thorough review of the literature and conceptualization through social mentality theory (Gilbert, 1989, 1992, 1995, 2000b, 2005) identified two potential mediating variables (shame and self-compassion) in the relationship between both types adaptive and maladaptive perfectionism and depression. Baron and Kenny's (1986) test of mediation through multiple regression was used in order to test the proposed research questions and hypotheses of this study.

Discussion

Prior to the discussion of the results, a few factors are important to keep in mind. First, due to multiple analysis, a Bonferoni correction was used to help prevent Type I error; therefore, all results were tested with a significance level of $p < .01$. Second, the

residuals from the raw data failed to meet the normality assumption of regression analysis. When data is not normally distributed, it can negatively affect parameter estimates, confidence intervals, and significance testing. In order to help provide more accurate parameter estimates and significance testing of the proposed models, transformation of the data were used (Field, 2013); the square root transformation of the depression variable found a better fit of the data and met the normality assumption of regression analysis. Therefore, all regression models used the transformed square root depression data. Last, results suggest that adaptive perfectionism acted as a suppressor variable in the proposed models; meaning it accounted for irrelevant variance of maladaptive perfectionism instead of variance of depression. The implications of adaptive perfectionism as a suppressor variable is discussed after all results of the proposed research questions addressing the findings of maladaptive perfectionism, shame, self-compassion, and depression have been discussed.

Research Question One

Research question one assessed the relationship between maladaptive perfectionism and depression. Results from a bivariate correlation analysis showed maladaptive perfectionism was significantly negatively correlated with self-compassion, and significantly positively correlated with shame and depression. All demographic variables were entered into the regression model first to account for their effect on depression. Only age was found to be a significant predictor of changes in depression and implied that younger individuals are more likely to have higher levels of depression, which is consistent with previous research (Mirowsky & Ross, 1992). After the effects of demographic variables were accounted for, maladaptive perfectionism was found to be a

statistically significant predictor of depression, which is congruent with past research (Cheng et al., 2015; Enns et al., 2002; Hewitt & Flett, 1990; Macedo et al., 2015; Malinowski et. al., 2017; Mehr & Adams, 2016; Rice et al., 1998; Shahar et al., 2003; Sherry et al., 2014; Stuewig & McCloskey, 2005; Tran & Rimes, 2017; Wang et al., 2007). Individuals with higher levels of maladaptive perfectionism are likely to report higher levels of depression symptoms.

Research Question Two

Results from the bivariate correlation analysis found a negative correlation between self-compassion and depression, and a positive correlation between shame and depression. Meaning, as self-compassion increases, depression decreases, and as shame increases, depression increases. These results were congruent with prior research, which has suggested a negative correlation between self-compassion and depression (Arimitsu & Hofmann, 2015; Catilho, Carvalho, Marques, & Pinto-Gouveia, 2017; Friis et al., 2016; Mehr & Adams, 2016; Podina et al., 2015; Stephenson et al., 2017), and positive correlation between shame and depression (Castilho et al., 2016; Cheung et al., 2004; Costa et al., 2016; De Rubeis & Hollenstein, 2009; Matos et al., 2013; Pinto-Gouveia, Matos, et al., 2014; Stuewig & McCloskey, 2005). Results from the current study found that after accounting for all demographic variables, shame and self-compassion were significant predictors of depression. Meaning those with high levels of shame and low levels of self-compassion are more likely to experience depressive symptoms.

Research Question Three

Finally, research question three examined the final step in determining mediation. In order for self-compassion and shame to act as mediators between maladaptive

perfectionism and depression, the direct relationship between maladaptive perfectionism and depression needed to be significantly weakened after self-compassion and shame was added into the regression model. Results found that maladaptive perfectionism were no longer significant predictors of depression after shame and self-compassion were included in the regression model; whereas, shame and self-compassion accounted for a significant portion of the variance in depression. Results examining the significance of change between the direct and mediating effects found that the level of change was statistically significant. Meaning individuals with maladaptive perfectionism experience depression mostly because of low levels of self-compassion and high levels of shame.

The results from this study support the theoretical assumption that maladaptive perfectionism is correlated to feelings of shame and less self-compassion, and that those feelings of shame with poor self-compassion is positively correlated with depression. A key feature of maladaptive perfectionism is a highly critical self-evaluative process (Slade & Owens, 1998; Blatt, 1995), which is very similar to the self-criticism experienced through shame as proposed by Gilbert (2005). Social Mentality Theory postulates that people strive for perfection for social desirability, social acceptance, and social ranking. When goals of social acceptance are perceived not to be met, individuals are likely to experience shame and subsequent depression as it is a reflection of their perceived lack of social desirability and standing with those important in their lives (Gilbert, 2005).

Adaptive Perfectionism

As previously discussed, adaptive perfectionism was found to act as a suppressor variable in this study, which was an unexpected finding. Some studies have found a

significant negative correlation between adaptive perfectionism and depression (Limburg et al., 2016; Macedo et al., 2015; Mathew et al., 2014). While other studies have found no relationship between adaptive perfectionism and depression (Beiling et al., 2004; Rice et al., 1998). Yet interestingly, another study by Enns et al. (2002) found a positive correlation between adaptive perfectionism and depression proneness, but not the actual development of depressive symptoms. The inconsistencies in research on the impact of adaptive perfectionism on mental health functioning warrant further investigation.

Adaptive perfectionism was only significantly correlated with maladaptive perfectionism, yet appeared to be a significant predictor of shame, self-compassion, and depression. Smith et al. (1992) report that when a predictor variable (adaptive perfectionism) is: a) not correlated with the criterion (depression, shame, and self-compassion); b) is correlated with one or more predictor variables (maladaptive perfectionism); and c) is appearing as a significant predictor of the criterion (depression, self-compassion, and shame), the variable may be acting as a suppressor variable.

While there is no consensus on how to define a suppressor variable, Pedhazur (1997) described suppressor variables as:

> … the inclusion in the equation of a seemingly useless variable, so far as prediction of the criterion is concerned, suppresses, or control for, irrelevant variance, that is, variance that it shares with the predictors and not with the criterion, thereby ridding the analysis of irrelevant variation, or noise – hence the name *suppressor variable.* (Pedhazur, 1997, p. 186)

The results from post hoc analyses implies that when adaptive perfectionism was entered into a regression model with maladaptive perfectionism, the variation of depression being reported as explained by adaptive perfectionism is actually irrelevant variation of the maladaptive perfectionism variable. In sum, it appears adaptive perfectionism is acting as

a suppressor variable and is not actually correlated with, or a significant predictor of depression, self-compassion, or shame in this study.

Implications

Results from this study provided important implications for future theory, research, and practice. The following section includes important theoretical and methodological implications to help guide future research. Last, important clinical implications are discussed to help guide treatment for individuals with depression who also have high maladaptive perfectionism, shame, and low self-compassion.

Theoretical Implications

Social Mentality Theory was used to help design and explain the proposed relationship between the various constructs of this study. According to Gilbert (2005), a key drive for people is social approval and acceptance, which is a component of perfectionism (Blatt, 1995). We learn at an early age through our parents and caretakers how to view ourselves through our accomplishments and messages we receive during times of success and failure. For instance, if a child is continuously informed they are a failure for not meeting their parent's expectations, they will start to develop internalized schemas of shame, and the belief that they must perform better to be accepted (Gilbert, 2005). When their internalized schemas of personal failure are continuously activated by perceived failures and lack of self-compassion, they are likely to develop depressive symptoms (Cheung et al., 2004; Gilbert, 1992, 2000b). Results from this study support Social Mentality Theory. Individuals with maladaptive perfectionism have both an intrinsic self-criticism and belief that they must be perfect for others to approve of them. When they continuously feel as though they are failing they experience shame, which

makes them aware of the risk of social rejection (Gilbert, 2005) and vulnerable to symptoms of depression. The results of this study imply that feelings of shame and low self-compassion are explain the relationship between maladaptive perfectionism and depression through the mechanisms described above.

Researchers have continuously supported the two higher order factor structure of perfectionism: adaptive and maladaptive (Ashby et al., 2012; Enns et al., 2002; Frost et al., 1993; Hill et al., 2010; Hill et al., 2004; Hill et al., 1997; Limburg et al., 2016; Slade & Owens, 1998). Both factors have been theoretically thought of as separate constructs with similar characteristics (i.e., setting of high standards). The key distinguishing feature has been described through the difference in self-acceptance. Specifically, adaptive perfectionism is thought to allow for self-acceptance and satisfaction of one's performance (Rice & Dellwo, 2002), while maladaptive perfectionism is thought to include a highly self-critical evaluative process with an inability to accept one's faults (Stoeber et al., 2010). Results from the current study support a theoretical overlap between the two constructs, as both were found to be positively correlated; yet both had different implications in their relationship to the mental health outcomes of shame, self-compassion and depression.

Results showed no significant relationship between self-compassion and adaptive perfectionism. This finding was unexpected given how adaptive perfectionism was theoretically different from maladaptive perfectionism through self-acceptance, which is a characteristic of self-compassion (Neff, 2003b). Self-compassion is described as encompassing three characteristics: self-acceptance, mindfulness, and identification with the human experience (Neff, 2003b). While self-compassion and adaptive perfectionism

share self-acceptance, results from this study imply that this common quality is not enough to explain a significant correlation between self-compassion and adaptive perfectionism. Meaning, adaptive perfectionism may still be correlated to self-acceptance, but uncorrelated with mindfulness and identification with the human experience. Therefore, the theoretical construct of self-compassion may not be the best mechanism to explain the protective factors of adaptive perfectionism from negative mental health outcomes since it encompasses more dimensions than just self-acceptance.

Self-compassion was found to be significant predictor of depression in this study, which is congruent with prior research (Arimitsu & Hofmann, 2015; Castilho et al., 2017; Friis et al., 2016; Mehr & Adams, 2016; Podina et al., 2015; Stephenson et al., 2017), and supports the proposed theoretical implications that self-compassion acts as a protective factor against depression in individuals with maladaptive perfectionism. Gilbert (1989) proposed that the self-soothing system in the brain is activated by social security, which is associated with feelings of acceptance. Meanwhile, Neff (2003b) has also described the components of self-compassion as a self-soothing strategy as it allows for self-acceptance, mindfulness of one's turmoil without over-identification with it, and connection to others through the common human experience. Results from this study support this connection between self-compassion and a decrease in negative mental health outcomes potentially through self-soothing qualities of acceptance and feelings of security.

Methodological Implications

Several important methodological implications were identified through this study. Research has continuously found support that a two-factor model of perfectionism

(adaptive and maladaptive) better represents the construct than a single general perfectionism construct (Ashby et al., 2012; Cox et al., 2002; Frost et al., 1993; Hill et al., 2010; Hill et al., 2004; Hill et al., 1997; Limburg et al., 2016; Slade & Owens, 1998). A thorough review of the different scales to measure perfectionism, found 16 scales that measure different characteristics and personality features of perfectionism (Rice et al., 2016). While the Perfectionism Inventory (Hill et al., 2004) was appropriate to use for the purposes of this study, as it allowed the measurement of both adaptive and maladaptive perfectionism, it is important to consider the effect of overlap between adaptive and maladaptive perfectionism when choosing which scale to use for research purposes.

This study found a positive correlation between adaptive and maladaptive perfectionism, which is congruent with other studies (i.e., Beiling et al., 2004; Hill et al., 2004; Limburg et al., 2016; Rice et al., 2016). However, adaptive perfectionism was not correlated with the mediating or predictor variables of this study; yet results showed adaptive perfectionism was a significant predictor of both mediators and outcome variable. These conflicting results can easily lead to misleading conclusions about the relationship of adaptive perfectionism and outcome variables. Post hoc analyses found adaptive perfectionism was only significant when entered with maladaptive perfectionism simultaneously. Due to inconsistent findings on the effects of adaptive perfectionism, it would benefit future researchers to consider the possibility of suppressor variables when researching adaptive and maladaptive perfectionism in the same model. Perhaps measures that have less overlap between adaptive and maladaptive perfectionism would help isolate the effects of maladaptive and adaptive perfectionism. Furthermore, to help clearly delineate between the effects of adaptive versus maladaptive perfectionism, it is

also recommended future research examine adaptive and maladaptive perfectionism in separate models to avoid the risk of misleading results.

Findings from previous studies have found inconsistent results regarding the relationship between adaptive perfectionism and psychopathology. Some studies have found a negative correlation with between adaptive perfectionism and depression (Limburg et al., 2016; Macedo et al., 2015; Mathew et al., 2014), while others have found no relationship (Beiling et al., 2004; Rice et al., 1998) including results from this study. When examining the differences between the aforementioned studies with conflicting results, the primary difference was found to be in how depression was measured. The majority of studies used either the FMPS or HMPS to measure perfectionism (Beiling et al., 2004; Limburg et al., 2016; Macedo et al., 2015; Rice et al., 1998); however, each one used a different survey to measure depression. Perhaps the conflicting research findings on the effects of adaptive perfectionism on depression are due to the measures used for the dependent variable rather than how adaptive perfectionism is measured. This study used the PHQ-9 to measure depression; which, only has nine items based on the DSM-5 diagnostic criteria. The limited scope of depressive symptoms gathered through the PHQ-9 could have contributed to the limited findings between adaptive perfectionism and depression. It may behoove future researchers to consider a larger depression scale that captures symptoms of depression more thoroughly.

Previous studies have found a negative correlation between adaptive perfectionism and shame (Fedewa et al., 2005; Pirbaglou et al., 2013), yet results from this study found no correlation. Some researchers have suggested that perhaps the relationship between adaptive perfectionism and mental health functioning is not a linear

relationship, which has been the primary way in which adaptive perfectionism has been studied. If adaptive perfectionism were to have a curvilinear relationship with mental health outcomes, it would explain inconsistent research results (Hill et al., 2004). For instance, hypothetically, if an individual scores low on Organization (a subscale of the adaptive perfectionism index of the Perfectionism Inventory), they may also score low on feelings of self-efficacy (a negative outcome). Similarly, if they scored high on Organization, perhaps they would also score high on measures of obsessive-compulsive traits, another negative outcome (Hill et al., 2004). In other words, if both high and low scores of Organization were linked to negative outcomes, while moderate scores were indicative of positive outcome, it would allow for the characteristics described as adaptive perfectionism to be present only within that moderate range of scores. Future research should examine whether adaptive perfectionism has a curvilinear relationship with depression and other mental health outcomes.

The current study examined the effects of adaptive/maladaptive perfectionism, self-compassion, shame, and depression in a college population that consisted primarily of individuals of Caucasian ethnicity. This restricted sample is not representative of the general population and the rates of reported levels of adaptive/maladaptive perfectionism, shame, self-compassion, and depression may be influenced by the primary culture represented in the sample. For instance, how perfectionism, shame, self-compassion impact psychopathology in other cultures may vary from the primary culture represented in this study. Examining these constructs in a more diverse sample may help provide broader variation in the observed scores that are more represented of the general population that encompasses multiple cultures.

Practice Implications

Results from the current study provided significant practice implications for counseling psychologists; including, focusing treatment on various constructs that mediate the relationship between maladaptive perfectionism and psychopathology. Specifically, shame and self-compassion were found to be full mediators between maladaptive perfectionism and depression. Meaning for those with high maladaptive perfectionism and depression, they are most likely experiencing high levels of shame with limited self-compassion. Treatment aimed at decreasing shame and increasing self-compassion may be instrumental in lowering levels of depression for individuals with high maladaptive perfectionism. Counseling psychologists can help people handle their feelings of personal failure, shame, and self-criticism with self-kindness, mindfulness, and identifying with the common human experience on being imperfect. Various treatments such as, Gilbert's (2010) Compassion-Focused Treatment (CFT), and Neff and Germer's (2013) Mindful Self-Compassion (MSC) have been designed and found to be effective in increasing levels of self-compassion in both clinical and non-clinical populations. These approaches may prove especially useful for counseling psychologists working with individuals with maladaptive perfectionism, shame, and depression.

Similar to other studies, results from this study showed a significant positive correlation between adaptive and maladaptive perfectionism (i.e., Beiling et al., 2004; Chen et al., 2016; Hill et al., 2004; Limburg et al., 2016). These findings suggest individuals are likely to experience both adaptive and maladaptive perfectionism characteristics, which aligns with the theoretical concept of perfectionism. To help prevent the onset of psychopathology that often accompanies maladaptive perfectionism,

individuals with perfectionism tendencies may benefit from treatment that helps enhance the adaptive aspects of perfectionism; including: setting of high standards, confidence in one's ability to reach those high standards, acceptance of one's performance, and ability to move past perceived failures without rumination or self-criticism. Furthermore, since adaptive and maladaptive perfectionism are positively correlated, the prevalence of adaptive and maladaptive perfectionistic qualities may be state dependent. For instance, identifying situations where they are able to exhibit more adaptive perfectionism characteristics and increase mindfulness and self-efficacy skills to generalize these abilities may prove beneficial.

Social Mentality Theory postulates that perfectionism and shame develop as a result of parenting styles and early parent-child interactions (Enns et al., 2002; Gilbert, 2005; Harvey, Moore, & Koestner, (2017). Oros, Iurno, & Serppe, 2017; Reilly et al., 2016), which may also imply a potential area of treatment to help prevent the development of maladaptive perfectionism, shame, and depression. Since shame has been found to be a significant mediator in the relationship between maladaptive perfectionism and depression, treatment ought to focus on helping parents limit shaming statements and harsh criticism during early childhood. Instead, Social Mentality Theory postulates that through compassion, children could develop healthier schemas of relationships and have more acceptance of their performances without fear of rejection or criticism (Gilbert, 2005). Counseling psychologists can assist new parents at identify their *other oriented perfectionism* that may impact their standards for their child/children, and identify how their expectations were similar to familial patterns and rules passed down through various generations. Identifying their own experiences that led to shame versus self-compassion

can help new parents identify parenting methods to foster greater self-compassion and acceptance of a child's behavior/performance.

While preventative treatment is ideal, most counseling interventions are in response to distress already being experienced by the individual. Psychological distress amongst college students with maladaptive perfectionism has been heavily researched and results have shown: an increased rate of depression (Limburg et al., 2016; Tran & Rimes, 2017) and suicide (Grzegorek et al., 2004; Limburg et al., 2016), poor academic adjustment (Rice & Dellwo, 2001, 2002; Rice & Mirzadeh, 2000; Rice et al., 2006); and poor performance (Rice et al., 2006; Chang et al., 2016). Furthermore, any academic setting (kindergarten through college) appears to be an ideal place for the development of perfectionistic tendencies (Grzegorek et al., 2004; Hewitt et al., 2002; Stoeber & Rambow, 2007). It appears students in particular are especially prone to perfectionistic behaviors and beliefs, which may prove beneficial in their success if they can develop adaptive rather than maladaptive perfectionism. There is an alarming correlation between maladaptive perfectionism and suicide in college students (Baumeister, 1990; Blatt, 1995; Hewitt & Flett, 1991a; Hewitt et al., 1994; Johnson et al., 2011; Limburg et al., 2016), which Flett and Hewitt (2014) believe is greater than what research has found. Counseling Psychologists' ought to monitor and assess for suicide risk factors for students with maladaptive perfectionism and depression. For individuals with maladaptive perfectionism, depression, and suicidal ideation, Counseling Psychologists can target decreasing shame and increasing self-compassion to hopefully decrease the risk of suicide.

Embedded within the process of obtaining an education is receiving feedback from supervisors, professors, and peers to help the student develop specialty skills. Social Mentality Theory would postulate that students with maladaptive perfectionism might struggle to hear constructive feedback because it may further support a deeply held belief and fear that they are not good enough. Therefore, they may interpret feedback as confirmation of their own perception of failure and lead to symptoms of depression, shame, and in severe cases suicide. To help foster learning and success in college students, professors and supervisors may find it helpful to approach highly critical students with compassion and transparency regarding the purpose and intent of the feedback process. They can also encourage students to seek out additional support to help with overwhelming negative feelings students may be experiencing throughout their education.

Counseling psychologists in college counseling centers are likely to interact with college students who struggle with maladaptive perfectionism, depression, and suicidal ideation. Social Mentality Theory and results from this study suggest the link between maladaptive perfectionism and depression is due to shameful beliefs that they are not good enough and therefore not worthy of acceptance or belongingness (Gilbert, 2005). Therefore, treatment ought to target reducing shame and increasing self-compassion, which may help decrease depression in college students with maladaptive perfectionistic tendencies. Self-compassion would be an ideal treatment goal, as it allows the individual to practice self-kindness and acceptance. According to Social Mentality Theory (Gilbert, 2005), self-compassion allows for self-soothing and decreases the fear response experienced when an individual experiences alarm of rejection from others. Self-

compassion allows for the reorganization of beliefs about relationships and the self that ultimately help foster social security and belongingness (Gilbert & Irons, 2005). Similarly, self-compassion helps decrease fear of rejection and shame responses by allowing one to identify similarities between self and others, while accepting personal faults with mindfulness and compassion. If one is able to be accepting of personal faults, they are more likely to identify their strengths and gain a sense of social acceptance and belonging (Gilbert, 2005).

In the past, treatment has commonly focused on increasing self-esteem in young adults, however the risk of enhancing self-esteem in individuals with maladaptive perfectionism is the potential to further exacerbate an already ingrained highly critical self-evaluative process. Neff (2003b), identified the difference between self-compassion and self-esteem is the ability to be accepting towards and satisfied with one's own ability without having to compare performances with another individual, which often occurs when trying to increase self-esteem. Therefore, when working with college students with perfectionistic behaviors/beliefs, it would be beneficial if treatment focused on an internal locus of control, less self/other evaluative process, and increased self-compassion. Acceptance and Commitment Therapy (Forman, Herbert, Moitra, Yeomans, & Gellar, 2007), Compassion-Focused Treatment (CFT; Gilbert, 2010), and Mindful Self-Compassion (MSC; Neff & Germer, 2013) have all been found to have positive outcomes in attaining self-acceptance and compassion when treating depression.

Limitations

Limitations of the current study are important for future consideration. The current study sampled graduate and undergraduate students at a single university in the

Rocky Mountain region. Furthermore, the sample consisted primarily of Caucasians, females, and undergraduate students (Freshman 18.1%; Sophomore 11.5%; Junior 13.7%; Senior 19.9%; mean age for entire sample= 26.3, 9.6 *SD*). Due to the limited representation of diversity in the sample of this study (70% Caucasian), results were not representative of how the constructs of this study differ across cultures. It is important for counseling psychologists to consider the influence of culture and diversity for their clients and how they perceive the constructs of this study from their belief system. For instance, the acceptability and prevalence of perfectionism and depression may be different amongst those of Asian descent than from those of European descent. In fact, a recent study with a sample of Chinese college students found a three-factor model of perfectionism (adaptive, maladaptive, and order) best fit their data (Wang & Zhang, 2017), indicating there may be fundamental differences in the understanding of perfectionism between cultures. Therefore the generalizability of the results is limited. Participation in this study was voluntary and therefore the sample may only include individuals interested in the topic. Conclusions about causality between the variable could not be established as a result of the research design, sample recruitment method, and lack of control group.

This study examined perfectionism, shame, self-compassion, and depression through survey research, which captures the constructs at a specific moment in time. All constructs were measured as trait based constructs with the absence of context. Therefore, there is no way of ensuring true levels of perfectionism, shame, self-compassion, and depression were reported if the severity varies based on the situation. Other measures of shame ought to be considered for future research that wish to capture chronic

characterological shame. Similarly, the SCS-SF does not allow for in-depth analysis of the various factors involved in self-compassion. The inclusion of the original SCS would prove beneficial in future research to allow for a deeper understanding of which factors of self-compassion mediate the relationship between maladaptive perfectionism and depression. Since all data were collected through self-report surveys, there is no way to guarantee participants were truthful in their responses or that wanting to respond in a socially desirable way did not influence them. Future research ought to include a social desirability scale and include it as a covariate in the model to help control for the effects of social desirability.

Due to multiple regression analyses to answer several hypotheses, Bonferoni correction was used, dropping the significance level to .01. As a result, true significant results could have been masked in the current study (Pedhazur, 1997). Future research may want to consider conducting multiple studies to avoid using a Bonferoni correction. Also, due to violation of the normality of residuals assumption of regression analysis, the square root transformation of the outcome variable was used in all regression models (Field, 2013). This transformation limited the interpretation of results as it artificially changed the data to provide a normal distribution in order provide increased accuracy of parameter estimates and significance testing (Field, 2013). While transforming the data of this study limited the interpretation of results, future researchers ought to consider the risks and benefits of using skewed data versus transformed data when considering how to handle skewed data. Furthermore, a more diverse sample may help prevent skewed data and also allow for more generalizability of results.

Perfectionism has been highly studied throughout the social sciences. Consensus on a single definition, and agreement on the characteristics that define the construct has yet to be reached within the field (Rice et al., 2016). There are at least 16 different self-report surveys used to measure perfectionism. Some self-report surveys focus on certain types (i.e. self-oriented, other-oriented, socially prescribed), while others measure the higher order factors (adaptive or maladaptive). Future researchers ought to carefully consider which measure would best fit the purposes of their study. The current study only examined the proposed adaptive and maladaptive perfectionism through the Perfectionism Inventory. Hill et al., (2004) conducted a confirmatory factor analysis, which confirmed a two-factor structure to the PI with a CFI of .88, which was a better fit of data than the proposed one-factor model, which had a CFI of .77. However, .88 is still considered a low fit index score for factor structure (Hu & Bentler, 1999); therefore, future researchers ought to use a measure of perfectionism with a higher fit index of a two-factor structure when measuring adaptive and maladaptive perfectionism.

Another limitation of this study was the use of the PHQ-9. The PHQ-9 assesses depression through nine items based on the diagnostic criteria in the DSM-5. The limited number of items and easy accessibility of the PHQ-9 made it appropriate for the purposes of this study. Yet, future researchers ought to consider the complexities of depression symptomology and whether depression symptoms can be adequately measured through a nine-question measure. It may prove more helpful to measure depression through a more thorough measure (i.e. BDI-II), in order to more accurately capture other symptoms of depression not covered on the PHQ-9 (i.e. irritability, anger).

Conclusion

The goal of this study was to contribute to the literature on adaptive/maladaptive perfectionism and depression, and specifically identify mediating factors to help provide treatment implications and suggestions. Maladaptive perfectionism has been heavily researched thus far, yet, in comparison, little has been done on adaptive perfectionism. Therefore, the goal of this study was to address this gap in the literature and examine both forms of perfectionism, and their relationship with shame, self-compassion, and depression. Shame and self-compassion were found to be significant mediators in the relationship between maladaptive perfectionism and depression, while unexpectedly, adaptive perfectionism was found to act as a suppressor variable in the proposed model. Finally, chapter five provided the theoretical, methodological, and clinical implications of the findings. Overall, when treating individuals with depression who also exhibit high levels of maladaptive perfectionism, counseling psychologists ought to target lowering their shame and increasing their self-compassion. It is hoped that the results of this study will have useful implications for counseling psychologists who work with clients who exhibit maladaptive perfectionism, shame, and depression.

REFERENCES

Aberson, C. L., Healy, M., & Romero, V. (2000). In group bias and self-esteem: a meta-analysis. *Personality and Social Psychology Review, 4,* 157–173.

Alexander, B., Brewin, C. R., Vearnals, S., Wolff, G., & Leff, J. (1999). An investigation of shame and guilt in a depressed sample. *Psychology and Psychotherapy*, *72*, 323.

Andrews, B., & Hunter, E. (1997). Shame, early abuse and course of depression in a clinical sample: A preliminary study. *Cognition and Emotion, 11,* 373-381.

Andrews, B., Qian, M., & Valentine, J. D. (2002). Predicting depressive symptoms with a new measure of shame: The Experience of Shame Scale. *The British Journal of Clinical Psychology*, *41,* 29.

Arimitsu, K., & Hofmann, S. G. (2015). Cognitions as mediators in the relationship between self-compassion and affect. *Personality and Individual Differences*, *74*, 41-48.

Ashby, J., & Kottman, T. (1996). Inferiority as a distinction between adaptive and maladaptive perfectionism. *Individual Psychology, 52.* 237–245.

Ashby, J. S., & Rice, K. G. (2002). Perfectionism, dysfunctional attitudes and self-esteem. *Journal of Counseling and Development*, *80,* 197-203.

Ashby, J. S., Rice, K. G., & Martin, J. L. (2006). Perfectionism, shame, and depressive symptoms. *Journal of Counseling and Development*, *84*, 148-156.

Ashby, J., Slaney, R., Noble, C., Gnilka, P., & Rice, K. (2012). Differences between "normal" and "neurotic" perfectionists: Implications for mental health counselors. *Journal of Mental Health Counseling, 34*, 322-340. doi:10.17744/mehc.34.4.52h65w1n8l27r300

Asseraf, M., & Vaillancourt, T. (2015). Longitudinal links between perfectionism and depression in children. *Journal of Abnormal Child Psychology, 43*, 895-908. doi:10.1007/s10802-014-9947-9

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. doi:10.1037/0022-3514.51.6.1173

Baumeister, R. F. (1990). Suicide as escape from self. *Psychological Review, 99*, 90-113.

Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review, 103,* 5–33.

Beck, A. T. (1967). *Depression: Clinical experimental and theoretical aspects.* New York: Harper and Row

Beck, A.T., Steer, R.A., & Brown, G.K., (1996). *Beck Depression Inventory-II.* San Antonio, CA (1996).

Beiling, P. J., Israeli, A. L., & Antony, M. M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences, 36,* 1373-1385.

Black, J., & Reynolds, W. M. (2013). Examining the relationship of perfectionism, depression, and optimism: Testing for mediation and moderation. *Personality and Individual Differences, 54,* 426. doi:10.1016/j.paid.2012.10.012

Blankstein, K. R., Lumley, C. H., & Crawford, A. (2007). Perfectionism, hopelessness, and suicide ideation: Revisions to diathesis-stress and specific vulnerability models. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 25*, 279-319. doi:10.1007/s10942-007-0053-6

Blatt, S. J. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist, 50*, 1003-1020.

Broman-Fulks, J. J., Hill, R. W., & Green, B. A. (2008). Is perfectionism categorical or dimensional? A taxometric analysis. *Journal of Personality Assessment*, *90,* 481-490.

Brown, B. (1999). *Soul without shame: A guide to liberating yourself from the judge within*. Boston: Shambala.

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*, 219–229.

Castilho, P., Carvalho, S. A., Marques, S., & Pinto-Gouveia, J. (2017). Self-compassion and emotional intelligence in adolescence: A multigroup mediational study of the impact of shame memories on depressive symptoms. *Journal of Child and Family Studies*, 1-10.

Castilho, P., Pinto-Gouveia, J., & Duarte, J. (2016). Two forms of self-criticism mediate differently the shame–psychopathological symptoms link. *Psychology and Psychotherapy: Theory, Research and Practice, 90,* 44-54.

Chang, E. C. (2002). Examining the link between perfectionism and psychological maladjustment: Social problem solving as a buffer. *Cognitive Therapy and Research, 26,* 581-595.

Chang, E., Lee, A., Byeon, E., Seong, H., & Lee, S. M. (2016). The mediating effect of motivational types in the relationship between perfectionism and academic burnout. *Personality and Individual Differences*, *89*, 202-210.

Chang, E. C., Watkins, A., & Banks, K. H. (2004). How adaptive and maladaptive perfectionism relate to positive and negative psychological functioning: Testing a stress-mediation model in black and white female college students. *Journal of Counseling Psychology*, *51*, 93.

Chen, L., Zhong, M., Cao, X., Jin, X., Wang, Y., Ling, Y., ... & Yi, J. (2016). Stress and Self-Esteem Mediate the Relationships between Different Categories of Perfectionism and Life Satisfaction. *Applied Research in Quality of Life*, 1-13.

Cheng, P., Dolsen, M., Girz, L., Rudowski, M., Chang, E., & Deldin, P. (2015). Understanding perfectionism and depression in an adult clinical population: Is outcome expectancy relevant to psychological functioning? *Personality and Individual Differences*, *75*, 64-67.

Cheung, M., Gilbert, P., & Irons, C. (2004). An exploration of shame, social rank and rumination in relation to depression. *Personality and Individual Differences*, *36*, 1143–1153.

Costa, P. T., & McCrae, R. R. (1990). Personality disorders and the five-factor model of personality. *Journal of Personality Disorders, 4,* 362–371.

Costa, J., Marôco, J., Gouveia, J. P., & Ferreira, C. (2016). Shame, self-criticism, perfectionistic self-presentation and depression in eating disorders. *International Journal of Psychology and Psychological Therapy, 16,* 315-328.

Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin, 130,* 392–414.

De Rubeis, S., & Hollenstein, T. (2009). Individual differences in shame and depressive symptoms during early adolescence. *Personality and Individual Differences, 46,* 477–482.

Dunkley, D. M., & Blankstein, K. R. (2000). Self-critical perfectionism, coping, hassles, and current distress: A structural equation modeling approach. *Cognitive Therapy and Research, 24,* 713–730.

Ehret, A. M., Joormann, J., & Berking, M. (2014). Examining risk and resilience factors for depression: The role of self-criticism and self-compassion. *Cognition and Emotion*, 1-9. doi:10.1080/02699931.2014.992394

Eisenberg, D., Nicklett, E. J., Roeder, K., & Kirz, N. E. (2011). Eating disorder symptoms among college students: Prevalence, persistence, correlates, and treatment-seeking. *Journal of American College Health*, *59*, 700-707.

Ellis, A. (1973). *Humanistic psychotherapy: The rational-emotive approach*. New York: Julian Press.

Enns, M. W., Cox, B. J., & Clara, I. (2002). Adaptive and maladaptive perfectionism: Developmental origins and association with depression proneness. *Personality and Individual Differences, 33,* 921-935.

Enns, M. W., Cox, B. J., Sareen, J., & Freeman, P. (2001). Adaptive and maladaptive perfectionism in medical students: a longitudinal investigation. *Medical Education, 35,* 1034–1042.

Fedewa, B. A., Burns, L. R., & Gomez, A. A. (2005). Positive and negative perfectionism and the shame/guilt distinction: Adaptive and maladaptive characteristics. *Personality and Individual Differences, 38,* 1609-1619. doi:10.1016/j.paid.2004.09.026

Fessler, D. M. T. (2004). Shame in two cultures: Implications for evolutionary approaches. *Journal of Cognition and Culture, 4*, 207–262.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage Publications.

Flett, G. L., Blankenstein, K. R., & Hewitt, P. L. (1992). Components of perfectionism and procrastination in college students. *Social Behavior and Personality, 20*, 85-94.

Flett, G. L., Hewitt, P. L., & Blankenstein, K. R. (1994). Dimensions of perfectionism and type A behavior. *Personality and Individual Differences, 16*, 477-489.

Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Mosher, S. W. (1991). Perfectionism, self-actualization, and personal adjustment. *Journal of Social Behavior and Personality, 6,* 147-160.

Flett, G. L., Hewitt, P. L., Blankstein, K. R., & O'Brien, S. (1991). Perfectionism and learned resourcefulness in depression and self-esteem. *Personality and Individual Differences, 12,* 61-68.

Flett, G. L., Hewitt, P. L., & Heisel, M. J. (2014). The destructiveness of perfectionism revisited: Implications for the assessment of suicide risk and the prevention of suicide. *Review of General Psychology, 18,* 156.

Fontaine, J. R. J., Luyten, P., De Boeck, P., & Corveleyn, J. (2001). The test of self-conscious affect: Internal structure, differential scales and relationships with long-term affects. *European Journal of Personality, 15,* 449–463.

Forman, E. M., Herbert, J. D., Moitra, E., Yeomans, P. D., & Geller, P. A. (2007). A randomized controlled effectiveness trial of acceptance and commitment therapy and cognitive therapy for anxiety and depression. *Behavior Modification, 31,* 772-799.

Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51,* 115-134. doi:10.1037/0022-0167.51.1.115

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. *American Psychologist, 56,* 218–226.

Friis, A. M., Johnson, M. H., Cutfield, R. G., & Consedine, N. S. (2016). Kindness matters: A randomized controlled trial of a mindful self-compassion intervention improves depression, distress, and HbA1c among patients with diabetes. *Diabetes Care, 39,* 1963-1971.

Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. I., & Neubauer, A. L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14,* 119-126.

Frost, R. Q, Marten, P., Lahart, C, & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research 14,* 449- 468.

Ganske, K., & Ashby, J.S. (2007). Multidimensional perfectionism and career decision making self efficacy. *Journal of Employment Counselling, 44,* 17–28. doi:10.1002/j.2161-1920.2007.tb00021.x

Germer, C. (2015). Inside the heart of healing. *Psychotherapy Networker, 39,* 24 – 29.

Gilbert, P. (1989). *Human nature and suffering*. Hove: Lawrence Erlbaum.

Gilbert, P. (1992). *Depression: The evolution of powerlessness.* Hove, UK, and New York: Erlbaum and Guilford Press.

Gilbert, P. (1995). Biopsychosocial approaches and evolutionary theory as aids to integration in clinical psychology and psychotherapy. *Clinical Psychology and Psychotherapy, 2,* 135-156.

Gilbert, P. (1998). What is shame? Some core issues and controversies. In P. Gilbert & B. Andrews (Eds.), *Shame: Interpersonal behavior, psychopathology, and culture* (pp. 3–38). New York, NY: Oxford University Press.

Gilbert, P. (2000a). Social mentalities: Internal "social" conflicts and the role of inner warmth and compassion in cognitive therapy. In P. Gilbert & K. G. Bailey (Eds.), *Genes on the couch: Explorations in evolutionary psychotherapy* (pp. 118-150). Hove, UK: Psychology Press.

Gilbert, P. (2000b). Varieties of submissive behavior: Their evolution and role in depression. In L. Sloman & P. Gilbert (Eds.), *Subordination and defeat: An evolutionary approach to mood disorders* (pp. 3-46). Hillsdale, NJ: Erlbaum.

Gilbert, P. (2001). Evolution and social anxiety: The role of social competition and social hierarchies. *Psychiatric Clinics of North America, 24,* 723-751.

Gilbert, P. (2002). Body shame: A biopsychosocial conceptualization and overview, with treatment implications. In P. Gilbert & J. Miles (Eds.), *Body shame: Conceptualization, research and treatment* (pp. 3-54). London: Brunner-Routledge.

Gilbert, P. (2005). Evolution and depression: Issues and implications. *Psychological Medicine, 36,* 287-297.

Gilbert, P. (2010). Compassion focused therapy: Distinctive features. New York, NY: Routledge/Taylor & Francis Group.

Gilbert, P., Baldwin, M. W., Irons, C., Baccus, J. R., & Palmer, M. (2006). Self-criticism and self-warmth: An imagery study exploring their relation to depression. *Journal of Cognitive Psychotherapy, 20,* 183-200.

Gilbert, P., & Irons, C. (2005). Therapies for shame and self-attacking, using cognitive, behavioral, emotional imagery and compassionate mind training. In P. Gilbert (Ed.), *Compassion: Conceptualizations, research and use in psychotherapy* (pp. 263–325). London: Routledge.

Gilbert, P., McEwan, K., Bellew, R., Mills, A., & Gale, C. (2009). The dark side of competition: How competitive behavior and striving to avoid inferiority are linked to depression, anxiety, stress and self-harm. *Psychology and Psychotherapy: Theory, Research and Practice, 82*, 123–136

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy, 13*, 353.

Greenberg, L. S. (2004). Emotion–focused therapy. *Clinical Psychology & Psychotherapy, 11*, 3-16.

Gruenewald, T. L., Dickerson, S. S., & Kemeny, M. E. (2007). A social function for self-conscious emotions: The social self-preservation theory. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 68–87). New York, NY: Guilford Press.

Grzegorek, J. L., Slaney, R. B., & Franze, K. G. (2004). Self-criticism, dependency, self-esteem, and GPA satisfaction among clusters of perfectionists and non-perfectionists. *Journal of Counseling Psychology, 51*, 192-200.

Hamachek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology, 15,* 27-33.

Harder, D. W., Cutler, L., & Rockart, L. (1992). Assessment of shame and guilt and their relationships to psychopathology. *Journal of Personality Assessment, 59*, 584–604.

Harris, P. W., Pepper, C. M., & Maack, D. J. (2008). The relationship between maladaptive perfectionism and depressive symptoms: The mediating role of rumination. *Personality and Individual Differences, 44*, 150-160. doi:10.1016/j.paid.2007.07.011

Harvey, B. C., Moore, A. M., & Koestner, R. (2017). Distinguishing self-oriented perfectionism-striving and self-oriented perfectionism-critical in school-aged children: Divergent patterns of perceived parenting, personal affect and school performance. *Personality and Individual Differences*, *113*, 136-141.

Hewitt, P. L., Caelian, C. F., Flett, G. L., Sherry, S. B., Collins, L., & Flynn, C. A. (2002). Perfectionism in children: Associations with depression, anxiety, and anger. *Personality and Individual Differences, 32*, 1049-1061. doi:10.1016/S0191-8869(01)00109-X

Hewitt, P. L., & Flett, G. L. (1990). Perfectionism and depression: A multidimensional analysis. *Journal of Social Behavior and Personality, 5,* 423-438.

Hewitt, P. L., & Flett, G. L. (1991a). Dimensions of perfectionism in unipolar depression. *Journal of Abnormal Psychology, 100*, 98-101.

Hewitt, P. L., & Flett, G. L. (1991b). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology, 60*, 456-470.

Hewitt, P. L., & Flett, G. L. (1993). Dimensions of perfectionism, daily stress, and depression: A test of the specific vulnerability hypothesis. *Journal of Abnormal Psychology, 102,* 58-65.

Hewitt, P. L., Flett, G. L., Besser, A. Sherry, S. B., & McGee, B. (2003). Perfectionism is multidimensional: A reply to Shafran, Cooper, and Fairburn, 2002. *Behavior Research and Therapy, 10,* 1221-1236.

Hewitt, P. L., Flett, G. L., & Turnbull, W. (1992). Perfectionism and Multiphasic Personality Inventory (MMPI) indices of personality disorder. *Journal of Psychopathology and Behavioral Assessment, 14,* 323-335.

Hewitt, P. L., Flett, G. L., & Turnbull-Donovan, W. (1992). Perfectionism and suicidal potential. *British Journal of Clinical Psychology, 31,* 181-190.

Hewitt, P. L., Flett, G. L., & Weber, C. (1994). Dimensions of perfectionism and suicide ideation. *Cognitive Therapy and Research, 18,* 439-460.

Hill, R. W., Huelsman, T. J., & Araujo, G. (2010). Perfectionistic concerns suppress associations between perfectionistic strivings and positive life outcomes. *Personality and Individual Differences, 48,* 584-589.

Hill, R. W., Huelsman, T. J., Furr, R. M., Kibler, J., Vicente, B. B., & Kennedy, C. (2004). A new measure of perfectionism: The perfectionism inventory. *Journal of Personality Assessment, 82,* 80-91. doi:10.1207/s15327752jpa8201_13

Hill, R. W., McIntire, K., & Bacharach, V. R. (1997). Perfectionism and the big five factors. *Journal of Social Behavior& Personality, 12*, 257–270.

Horney, K. (1950). *Neurosis and human growth: The struggle toward self-realization*. New York: Norton.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6,* 1-55. doi:10.1080/10705519909540118

IBM Corp. (2013). IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

Instructional Manual: Instructions for Patient Health Questionnaire (PHQ) and GAD-7 Measures (nd). Retrieved from: http://www.phqscreeners.com/instructions/instructions.pdf

Jacobs, R. H., Silva, S. G., Reinecke, M. A., Curry, J. F., Ginsburg, G. S., Kratochvil, C. J., & March, J. S. (2009). Dysfunctional Attitudes Scale perfectionism: A predictor and partial mediator of acute treatment outcome among clinically depressed adolescents. *Journal of Clinical Child and Adolescent Psychology, 38*, 803– 813. doi:10.1080/15374410903259031

Johnson, S. M. (2011). The attachment perspective on the bonds of love: A prototype for relationship change. *The Emotionally Focused Casebook: New Directions in Treating Couples*, 31-58.

Johnson, E. A., & O'Brien, K. A. (2013). Self-compassion soothes the savage EGO-threat system: Effects on negative affect, shame, rumination, and depressive symptoms. *Journal of Social and Clinical Psychology, 32*, 939-963.

Johnson, J., Wood, A. M., Gooding, P., Taylor, P. J., & Tarrier, N. (2011). Resilience to suicidality: The buffering hypothesis. *Clinical Psychology Review, 31*, 563–591. doi:10.1016/j.cpr.2010.12.007

Joireman, J. (2004). Empathy and the self-absorption paradox II: Self rumination and self-reflection as mediators between shame, guilt, and empathy. *Self and Identity, 3*, 225–238.

Jopling, D. A. (2000). *Self-knowledge and the self*. New York: Routledge.

Jordan, J. V. (1989). *Relational development: Therapeutic implications of empathy and shame*. Wellesley, MA: Stone Center Working Paper Series.

Kagan, J. (1981). *The second year: The emergence of self-awareness*. Cambridge, MA: Harvard University Press.

Kelly, A. C., Zuroff, D. C., & Shapira, L. B. (2009). Soothing oneself and resisting self-attacks: The treatment of two intrapersonal deficits in depression vulnerability. *Cognitive Therapy and Research, 33,* 301–313. doi:10.1007/s10608-008-9202-1

Keltner, D., & Buswell, B. N. (1996). Evidence for the distinctness of embarrassment, shame, and guilt: A study of recalled antecedents and facial expressions of emotion. *Cognition & Emotion, 10,* 155–172.

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lidnzey (Eds.), *The Handbook of Social Psychology* (4th ed., pp. 233-265). New York: Oxford University Press.

Kim, S., Thibodeau, R., & Jorgensen, R. S. (2011). Shame, guilt, and depressive symptoms: A meta-analytic review. *Psychological Bulletin, 137*, 68-96.

Klibert, J., Lamis, D. A., Collins, W., Smalley, K. B., Warren, J. C., Yancey, C. T., & Winterowd, C. (2014). Resilience mediates the relations between perfectionism and college student distress. *Journal of Counseling & Development, 92,* 75–82.

Klibert, J. J., Langhinrichsen-Rohling, J., & Saito, M. (2005). Adaptive and maladaptive aspects of self-oriented versus socially prescribed perfectionism. *Journal of College Student Development, 46*, 141-156.

Krieger, T., Altenstein, D., Baettig, I., Doerig, N., & Holtforth, M. G. (2013). Self-compassion in depression: Associations with depressive symptoms, rumination, and avoidance in depressed outpatients. *Behavior Therapy*, *44*, 501-513.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*, 606-613. doi:10.1046/j.1525-1497.2001.016009606.x

Lagattuta, K. H., & Thompson, R. A. (2007). The development of self-conscious emotions: Cognitive processes and social influences. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 91–113). New York, NY: Guilford Press.

Leary, M. R. (2004). Digging deeper: The fundamental nature of "self-conscious" emotions. *Psychological Inquiry, 15,* 129–131.

Leary, M. R. (2007). How the self became involved in affective experience: Three sources of self-reflective emotions. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 38–52). New York, NY: Guilford Press.

Lewis, H. B. (1971). *Shame and guilt in neurosis.* New York, NY: International Universities Press.

Lewis, M., & Brooks-Gunn, J. (1979). *Social cognition and the acquisition of self*. New York, NY: Plenum Press.

Levenson, R. W. (1999). The intrapersonal functions of emotion. *Cognition & Emotion, 13,* 481–504

Levinson, C. A., Rodebaugh, T. L., Shumaker, E. A., Menatti, A. R., Weeks, J. W., White, E. K., . . . Liebowitz, M. R. (2015). Perception matters for clinical perfectionism and social anxiety. *Journal of Anxiety Disorders, 29*, 61-71.

Limburg, K., Watson, H. J., Hagger, M. S., & Egan, S. J. (2016). The relationship between perfectionism and psychopathology: A meta-analysis: Perfectionism and psychopathology. *Journal of Clinical Psychology,* doi:10.1002/jclp.22435

Lo, A., & Abbott, M. J. (2013). Review of the theoretical, empirical, and clinical status of adaptive and maladaptive perfectionism. *Behaviour Change*, *30*, 96-116.

LoCicero, K.A., & Ashby, J.S. (2000). Multidimensional perfectionism in middle school age gifted students. *Roeper Review, 22*, 182–184. doi:10.1080/02783190009554030

Ludlow, L., & Klein, K. (2014). Suppressor variables: The difference between "is" versus "acting as." *Journal of Statistics Education*, *22*, 1-28.

Lutwak, N., Panish, J. B., Ferrari, J. R., & Razzino, B. E. (2001). Shame and guilt and their relationship to positive expectations and anger expressiveness. *Adolescence, 36*, 641-653.

Macedo, A., Soares, M. J., Amaral, A. P., Nogueira, V., Madeira, N., Roque, C., . . . Pereira, A. T. (2015). Repetitive negative thinking mediates the association between perfectionism and psychological distress. *Personality and Individual Differences, 72*, 220-224.

Malinowski, A. S., Veselka, L., & Atkinson, B. E. (2017). An investigation of vulnerability factors for depression. *Personality and Individual Differences, 107*, 126-130.

Marshall, S. L., Parker, P. D., Ciarrochi, J., Sahdra, B., Jackson, C. J., & Heaven, P. C. (2015). Self-compassion protects against the negative effects of low self-esteem: A longitudinal study in a large adolescent sample. *Personality and Individual Differences*, *74*, 116-121.

Maslow, A. H. (1968). *Toward a Psychology of Being*. New York: Van Nostrand.

Mathew, J., Dunning, C., Coats, C., & Whelan, T. (2014). The mediating influence of hope on multidimensional perfectionism and depression. *Personality and Individual Differences, 70*, 66-71. doi:10.1016/j.paid.2014.06.008

Matos, M., & Pinto-Gouveia, J. (2010). Shame as a traumatic memory. *Clinical Psychology and Psychotherapy, 17*, 299–312. doi:10.1002/cpp.659

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2013). Internalizing early memories of shame and lack of safeness and warmth: The mediating role of shame on depression. *Behavioural and Cognitive Psychotherapy, 41*, 479-493.

Mehr, K. E., & Adams, A. C. (2016). Self-compassion as a mediator of maladaptive perfectionism and depressive symptoms in college students. *Journal of College Student Psychotherapy*, *30*, 132-145.

Mikulincer, M., Shaver, P. R., & Pereg, D. (2003). Attachment theory and affect regulation: The dynamic development and cognitive consequences of attachment-related strategies. *Motivation and Emotion, 27*, 77–102.

Mirowsky, J., & Ross, C. E. (1992). Age and depression. *Journal of Health and Social Behavior*, 187-205.

Mistler, B. A. (2010). *Forgiveness, perfectionism, and the role of self-compassion* (Doctoral Dissertation). Available from ProQuest Dissertations & Theses Global. (Order No. 3436351).

Mobley, M., Slaney, R. B., & Rice, K. G. (2005). Cultural validity of the Almost Perfect Scale--Revised for African American college students. *Journal of Counseling Psychology, 52,* 629-639.

Muris P., & Meester, C. (2014). Small or big in the eyes of the other: On the developmental psychopathology of self-conscious emotions as shame, guilt, and pride. *Clinical Child and Family Psychology Review, 17,* 19-40. doi:10.1007/s10567-013-0137-z

National Institute of Mental Health. (n.d.). *Major depression among adults.* Retrieved from http://www.nimh.nih.gov/health/statistics/prevalence/major-depression-among-adults.shtml

Neff, K. D. (2003a). The development and validation of a scale to measure self-compassion. *Self and Identity, 2,* 223 – 250.

Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2,* 85 – 102.

Neff, K. D. (2004). Self-compassion and psychological well-being. *Constructivism in the Human Sciences, 9,* 27–37.

Neff, K. (2015). The five myths of self-compassion. *Psychotherapy Networker, 39*(5), 30-35.

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology, 69,* 28-44.

Neff, K. D., Hseih, Y., & Dejitthirat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4*, 263–287.

Neff, K., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41*, 139-154.

Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*, 225–240.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100*, 569–582.

Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology, 109,* 504-511.

Nolen-Hoeksema, S., Parker, L. E., & Larson, J. (1994). Ruminative coping with depressed mood following loss. *Journal of Personality and Social Psychology, 67*, 92–104.

O'Connor, R. C. (2007). The relations between perfectionism and suicidality: A systematic review. *Suicide & Life-Threatening Behavior, 37*, 698-714. doi:10.1521/suli.2007.37.6.698

O'Connor, D. B., O'Connor, R. C., & Marshall, R. (2007). Perfectionism and psychological distress: Evidence of the mediating effects of rumination. *European Journal of Personality, 21,* 429-552.

Onwuegbuzie, A. J. (2004). Academic procrastination and statistics anxiety. *Assessment & Evaluation in Higher Education, 29*, 3-19.

Orth, U., Berking, M., & Burkhardt, S. (2006). Self-conscious emotions and depression: Rumination explains why shame but not guilt is maladaptive. *Personality and Social Psychology Bulletin, 32,* 1608–1619.

Oros, L., Iuorno, O., & Serppe, M. (2017). Child perfectionism and its relationship with personality, excessive parental demands, depressive symptoms and experience of positive emotions. *The Spanish Journal of Psychology, 20*. doi:10.1017/sjp.2017.9

Pacht, A. R. (1984). Reflection on perfection. *American Psychologist, 39,* 386-390.

Pedhazur, E. J. (1997). *Multiple regression in behavioral research.* (3rd edition). New York, NY: Harcourt Brace College Publishers.

Periasamy, S., & Ashby, J.S. (2002). Multidimensional perfectionism and locus of control: Adaptive vs. maladaptive perfectionism. *Journal of College Student Therapy, 17,* 75–86.

Pinto-Gouveia, J., Duarte, C., Matos, M., & Fráguas, S. (2014). The protective role of Self-compassion in relation to psychopathology symptoms and quality of life in chronic and in cancer patients. *Clinical Psychology & Psychotherapy*, *21*, 311-323. doi:10.1002/cpp.1838

Pinto-Gouveia, J., Matos, M., Castilho, P., & Xavier, A. (2014). Differences between depression and paranoia: the role of emotional memories, shame and subordination. *Clinical Psychology & Psychotherapy*, *21*, 49-61.

Pirbaglou, M., Cribbie, R., Irvine, J., Radhu, N., Vora, K., & Ritvo, P. (2013). Perfectionism, anxiety, and depressive distress: evidence for the mediating role of negative automatic thoughts and anxiety sensitivity. *Journal of American College Health, 61*, 477-483.

Podina, I., Jucan, A., & David, D. (2015). Self-compassion: A buffer in the pathway from maladaptive beliefs to depression. An exploratory study. *Journal of Evidence-Based Psychotherapies, 15*, 97-109.

Qualtrics (2015). *Qualtrics: Version August, 2015*. Provo, UT: USA. Available from: http://www.qualtrics.com

Radloff, L. S. (1977). The CES-D scale a self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences, 48*, 757–761.

Raes, F., Pommier, E., Neff, K. D., & van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion scale. *Clinical Psychology & Psychotherapy, 18*, 250-255. doi:10.1002/cpp.702

Reilly, E. E., Stey, P., & Lapsley, D. K. (2016). A new look at the links between perceived parenting, socially-prescribed perfectionism, and disordered eating. *Personality and Individual Differences, 88*, 17-20.

Remler, D. K., & Van Ryzin, G. G. (2010). *Research methods in practice: Strategies for description and causation*. Thousand Oaks, CA: Sage Publications.

Resick, P. A., Galovski, T. E., Uhlmansiek, M. O. B., Scher, C. D., Clum, G. A., & Young-Xu, Y. (2008). A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. *Journal of Consulting and Clinical Psychology, 76*, 243–258. doi:10.1037/0022-006X.76.2.243

Rice, K. G., & Ashby, J. S. (2007). An efficient method for classifying perfectionists. *Journal of Counseling Psychology, 54,* 72-85.

Rice, K. G., Ashby, J. S., & Slaney, R. B. (1998). Self-esteem as a mediator between perfectionism and depression: A structural equations analysis. *Journal of Counseling Psychology, 45,* 304-314.

Rice, K. G., Ashby, J. S., & Slaney, R. B. (2007). Perfectionism and the five-factor model of personality. *Assessment, 14,* 385-398.

Rice, K. G., & Dellwo, J. P. (2001). Within semester stability and adjustment correlates of the Multidimensional Perfectionism Scale. *Measurement and Evaluation in Counseling and Development, 34,* 147-156.

Rice, K. G., & Dellwo, J. P. (2002). Perfectionism and self-development: Implications for college adjustment. *Journal of Counseling and Development, 80,* 188-196.

Rice, K. G., & Lopez, F. G. (2004). Maladaptive perfectionism, adult attachment, and self-esteem in college students. *Journal of College Counseling, 7,* 118-128.

Rice, K. G., Lopez, F. G., & Vergara, D. (2005). Parental/Social influences on perfectionism and adult attachment orientations. *Journal of Social and Clinical Psychology, 24*(4), 580-605. doi:10.1521/jscp.2005.24.4.580

Rice, K. G., & Mirzadeh, S. A. (2000). Perfectionism, attachment, and adjustment. *Journal of Counseling Psychology, 47,* 238-250.

Rice, K. G., & Pence, S. L. (2006). Perfectionism and obsessive-compulsive symptoms. *Journal of Psychopathology and Behavioral Assessment, 28,* 103-111.

Rice, K. G., Richardson, C. M., & Ray, M. E. (2016). Perfectionism in academic settings. In *Perfectionism, Health, and Well-Being* (pp. 245-264). Springer International Publishing.

Rice, K. G., & Slaney, R. B. (2002). Clusters of perfectionists: Two studies of emotional adjustment and academic achievement. *Measurement and Evaluation in Counseling and Development, 35*, 35-48.

Rice, K. G., Vergara, D. T., & Aldea, M. A. (2006). Cognitive-affective mediators of perfectionism and college student adjustment. *Personality and Individual Differences, 40*, 463-473.

Richardson, C. M., Rice, K. G., & Devine, D. P. (2014). Perfectionism, emotion regulation, and the cortisol stress response. *Journal of Counseling Psychology*, *61*, 110-118.

Rizvi, S. L. (2009). Development and preliminary validation of a new measure to assess shame: The Shame Inventory. *Journal of Psychopathology and Behavioral Assessment, 32*, 438-447.

Rizvi, S. L., & Linehan, M. M. (2005). The treatment of maladaptive shame in borderline personality disorder: A pilot study of "opposite action". *Cognitive and Behavioral Practice, 12*, 437-447.

Rogers, C. R. (1961). *On becoming a person.* Boston: Houghton Mifflin.

Schoenleber, M., & Berenbaum, H. (2012). Shame regulation in personality pathology. *Journal of Abnormal Psychology*, *121*, 433-446.

Schwarts, R. (2015). Facing our dark sides. *Psychotherapy Networker, 39*, 18-24.

Sedikides, C. (1993). Assessment, enhancement, and verification determinants of the self-evaluation process. *Journal of Personality and Social Psychology, 65*, 317–338.

Shafran, R., Cooper, Z., & Fairburn, C. G. (2002). Clinical perfectionism: A cognitive–behavioural analysis. *Behaviour Research and Therapy, 40*, 773-791.

Shahar, G., Blatt, S. J., & Zuroff, D. C. (2003). Role of perfectionism and personality disorder features in response to brief treatment for depression. *Journal of Consulting and Clinical Psychology, 71*, 629-633.

Sherry, S. B., Richards, J. E., Sherry, D. L., & Stewart, S. H. (2014). Self-critical perfectionism is a vulnerability factor for depression but not anxiety: A 12-month, 3-wave longitudinal study. *Journal of Research in Personality, 52*, 1-5. doi:10.1016/j.jrp.2014.05.004

Slade, P. D., & Owens, R. G. (1998). A dual process model of perfectionism based on reinforcement theory. *Behavior Modification, 22*, 372–390.

Slaney, R. B., Mobley, M., Trippi, J., Ashby, J., & Johnson, D. G. (1996). *The Almost Perfect Scale—Revised.* Unpublished manuscript, Pennsylvania State University University Park Campus.

Slaney, R. B., Rice, K. G., Mobley, M., Trippi, J., & Ashby, J. S. (2001). The revised Almost Perfect Scale. *Measurement and Evaluation in Counseling and Development, 34*, 130-145.

Smith, R. L., Ager, J. W., & Williams, D. L. (1992). Suppressor variables in multiple regression/correlation. *Educational and Psychological measurement, 52,* 17-29.

Smith, R. H., Webster, J. M., Parrott, W. G., & Eyre, H. L. (2002). The role of public exposure in moral and nonmoral shame and guilt. *Journal of Personality and Social Psychology, 83,* 138–159.

Sorotzkin, B. (1998). Understanding and treating perfectionism in religious adolescents. *Psychotherapy, 35,* 87–95.

Stephenson, E., Watson, P. J., Chen, Z. J., & Morris, R. J. (2017). Self-compassion, self-esteem, and irrational beliefs. *Current Psychology,* 1-7.

Stipek, D., Recchia, S., & McClintic, S. (1992). Self-evaluation in young children. *Monographs of the Society for Research in Child Development, 57,* 1–84.

Stoeber, J., Chesterman, D., & Tarn, T.A. (2010). Perfectionism and task performance: Time on task mediates the perfectionistic strivings-performance relationship. *Personality and Individual Differences, 48,* 458–462. doi:10.1016/j.paid.2009.11.02

Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. Personality and Social Psychology Review, 10, 295–319.

Stoeber, J., & Rambow, A. (2007). Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Personality and Individual Differences, 42,* 1379-1389.

Stoeber, J., Schneider, N., Hussain, R., & Matthews, K. (2014). Perfectionism and negative affect after repeated failure: Anxiety, depression, and anger. *Journal of Individual Differences, 35,* 87-94. doi:10.1027/1614-0001/a000130

Stolorow, R. D., Brandchaft, B. E., & Atwood, G. E. (1987). *Psychoanalytic treatment: An intersubjective approach.* Hillsdale, NJ: The Analytic Press.

Stumpf, H., & Parker, W. D. (2000). A hierarchical structural analysis of perfectionism and its relation to other personality characteristics. *Personality and Individual Differences, 28*, 837-852. doi:10.1016/S0191-8869(99)00141-5

Stuewig, J., & McCloskey, L. A. (2005). The relation of child maltreatment to shame and guilt among adolescents: Psychological routes to depression and delinquency. *Child Maltreatment, 10*, 324–336.

Suh, H., Gnilka, P. B., & Rice, K. G. (2017). Perfectionism and well-being: A positive psychology framework. *Personality and Individual Differences*, *111*, 25-30.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. (5th Ed.). Boston, MA: Pearson Education Inc.

Tangney, J. P. (1991). Moral affect: The good, the bad, and the ugly. *Journal of Personality and Social Psychology, 61*, 598–607. doi: 10.1037/0022-3514.61.4.598

Tangney, J. P., & Dearing, R. L. (2002). *Shame and guilt.* New York: Guilford Press.

Tangney, J. P., Dearing, R. L., Wagner, P. E., & Gramzow, R. (2000). Test of Self-Conscious Afffect-3. Psychtests, doi:10.1037/106464-000

Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt, and embarrassment distinct emotions? *Journal of Personality and Social Psychology, 70*, 1256-1269.

Tangney, J. P., & Tracy, J. L. (2012). Self-conscious emotions In: Leary M, Tangney JP, editors. *Handbook of self and identity (*2nd ed.). *New York: Guilford*, 446-478.

Tangney, J. P., Wagner, P., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology, 101*, 469-478.

Tracy, J. L., & Robins, R. W. (2006). Appraisal antecedents of shame and guilt: Support for a theoretical model. *Personality and Social Psychology Bulletin, 32,* 1339–1351

Tran, L., & Rimes, K. A. (2017). Unhealthy perfectionism, negative beliefs about emotions, emotional suppression, and depression in students: A mediational analysis. *Personality and Individual Differences, 110,* 144-147.

van der Kaap-Deeder, J., Soenens, B., Boone, L., Vandenkerckhove, B., Stemgée, E., & Vansteenkiste, M. (2016). Evaluative concerns perfectionism and coping with failure: Effects on rumination, avoidance, and acceptance. *Personality and Individual Differences, 101,* 114-119.

Vincent, N. K., & Walker, J. R. (2000). Perfectionism and chronic insomnia. *Journal of Psychosomatic Research, 49,* 349–354.

Wang, Y. P., & Gorenstein, C. (2013). Psychometric properties of the Beck Depression Inventory-II: a comprehensive review. *Revista Brasileira de Psiquiatria, 35,* 416-431.

Wang, H., & Li, J. (2017). Positive perfectionism, negative perfectionism, and emotional eating: The mediating role of stress. *Eating Behaviors 26,* 45-49.

Wang, K. T., Slaney, R. B., & Rice, K. G., (2007). Perfectionism in Chinese university students from Taiwan: A study of psychological well-being and achievement motivation. *Personality and Individual Differences, 42,* 1279-1290.

Wang, Y., & Zhang, B. (2017). The dual model of perfectionism and depression among Chinese University students. *South African Journal of Psychiatry, 23,* 1-7.

Wei, M., Liao, K. Y., Ku, T., & Shaffer, P. A. (2011). Attachment, Self-Compassion, empathy, and subjective Well-Being among college students and community adults. *Journal of Personality, 79*, 191-221.

Wei, M., Mallinckrodt, B., Larson, L. M., & Zakalik, R. A. (2005). Adult Attachment, Depressive Symptoms, and Validation From Self Versus Others. *Journal of Counseling Psychology, 52*(3), 368.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*, 548 –573. doi:10.1037/0033-295X.92.4.548

Williams, E. C. (2015). *Self-compassion and self-forgiveness as mediated by rumination, shame-proneness, and experiential avoidance: Implications for mental and physical health* (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Global. (Order No. 3727491).

Wolfe, R. N., Lennox, R. D., & Cutler, B. L. (1986). Getting along and getting ahead: Empirical support for a theory of protective and acquisitive self-presentation. *Journal of Social and Personality Psychology, 50, 356-361.*

Wong, C. C., & Mak, W. W. (2013). Differentiating the role of three self-compassion components in buffering cognitive-personality vulnerability to depression among Chinese in Hong Kong. *Journal of Counseling Psychology ,60*, 162-169.

Wong, Y., & Tsai, J. (2007). Cultural models of shame and guilt. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The Self-Conscious Emotions: Theory and Research* (pp. 209–223). New York, NY: Guilford Press.

World Health Organization (2015). *Depression.* Retrieved from http://www.who.int/mediacentre/factsheets/fs369/en/

World Health Organization (2013). *Workplace health promotion.* Retrieved from http://www.cdc.gov/workplacehealthpromotion/implementation/topics/depression.html

Yamaguchi, A., Kim, M., & Akutsu, S. (2014). The effects of self-construals, self-criticism, and self-compassion on depressive symptoms. *Personality and Individual Differences, 68,* 65-70. doi:10.1016/j.paid.2014.03.013

APPENDIX A

IRB APPROVAL

UNIVERSITY OF
NORTHERN COLORADO

DATE:	March 21, 2016
TO:	Julie Barritt, MA
FROM:	University of Northern Colorado (UNCO) IRB
PROJECT TITLE:	[836767-3] The Effects of Self-Compassion and Shame on the Relationship Between Perfectionism and Depression
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVAL/VERIFICATION OF EXEMPT STATUS
DECISION DATE:	March 21, 2016

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

Julie -

Than you for swiftly addressing all of the modifications requested. Please be sure to use these revised materials and protocols in your participant recruitment and data collection.

Best wishes with this interesting research.

Sincerely,

Dr. Megan Stellino, UNC IRB Co-Chair

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or Sherry.May@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

APPENDIX B

RECRUITMENT EMAIL

Recruitment Email

Dear Student,

My name is Julie Barritt and I am a 3rd year doctoral student in the Counseling Psychology program here at UNC. I am currently conducting a study for my dissertation to complete my program that examines the effects of perfectionism, shame, and self-compassion on depression, and would like to invite you to participate in the study. Participation is completely anonymous and will take about a half hour to complete.

By participating in this study, you will be given the option to enter into a drawing to win one of three $25.00 gift cards to Amazon. If you choose to enter into the drawing, you will be given a link to a separate survey to enter your email address for notification purposes. Your identity will remain confidential and cannot be linked back to your responses for the study.

If you would like to participate, please follow this link _____ to begin the study. Again, your participation is completely anonymous and greatly appreciated. If you have any questions, please feel free to email me at perk9728@bears.unco.edu. Your email will be kept confidential.

Sincerely,

Julie Barritt, MA
Doctoral Student
University of Northern Colorado

APPENDIX C

INFORMED CONSENT

UNIVERSITY of NORTHERN COLORADO

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH

Project Title: *The Effects of Shame and Self-Compassion on the Relationship Between Perfectionism and Depression*
Researcher: Julie Barritt, MA. Department of Applied Psychology and Counselor Education; E-mail: perk9728@bears.unco.edu
Research Advisor: Basilia Softas-Nall, Ph.D., Counseling Psychology
Phone: 970-351-1631; E-mail: basilia.softas-nall@unco.edu

The lead researcher in this study is investigating how perfectionism, shame, and self-compassion are related to depression. As a participant in this study, you will be asked to complete four questionnaires: 1) one that assesses perfectionistic beliefs and behaviors; 2) one that assesses feelings of shame; 3) one that assesses feelings of self-compassion; and 4) one that assess current symptoms of depression. The four questionnaires will take about 15-20 minutes total to complete. Last you will be asked to fill out a demographic questionnaire, providing information about your age, gender, ethnicity, year in school, field of study, and level of education.

For the four questionnaires and the demographic form, you will not provide your name. Your identity will remain anonymous, but will be assigned a random number for the purposes of data analysis. Furthermore, results of this study will be presented in group form only (e.g., averages). If you wish to participate in a drawing for a $25.00 gift card to Amazon, you will be given a link to a separate survey where you can provide your email address. All emails will remain confidential and cannot be linked back to responses provided on the questionnaire.

Risks to you are minimal. The risks for participating in this study may include mild discomfort as you answer questions related to perfectionism, shame, self-compassion and depression. There are no foreseeable direct benefits for you. Indirect benefits may include a better understanding of these four constructs and further assisting mental health professionals help those that struggle with perfectionistic tendencies and depression.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having an opportunity to ask any questions, please complete the questionnaires if you would like to participate in this research. By completing the questionnaires, you will give us permission for your participation. You may keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado, Greeley, CO 80639; 970-351-2161.

APPENDIX D

AUTHOR PERMISSION TO USE THE PI

From: Bob Hill <hillrw@appstate.edu>
Subject: Re: Perfectionism Inventory
Date: January 2, 2016 at 12:09:33 PM MST
To: "Barritt, Julie" <Julie.Barritt@unco.edu>

Julie, I appreciate your interest in the Perfectionism Inventory.
I am attaching the PI as a Word doc, with scoring directions.
I am also attaching an Excel file you can use to take (or administer) the PI. Then you can click on the Results tab for scale scores.
You have my permission to use the PI for your research. You can use the composite scale score Conscientious Perfectionism for a measure of Adaptive, and the Self-Evaluative composite for Maladaptive perfectionism.
Best wishes with your research,
Bob Hill

On 1/2/2016 1:34 PM, Barritt, Julie wrote:
Dr. Hill,

My name is Julie Barritt and I am a doctoral student at the University of Northern Colorado. I am currently working on my dissertation and would like to examine possible mediating effects of self-compassion and shame on the relationship between adaptive and maladaptive perfectionism and depression. After reviewing previous literature it looks like the Perfectionism Inventory could provide a score for both adaptive and maladaptive perfectionism for each participant in my study. I am writing to ask your permission to use the PI in my study. My dissertation will be administered electronically. Can I use the PI in an electronic format by importing and distributing it to participants through Qualtrics?

Any further information you have on the PI would be greatly appreciated. Thank you for your time and help.

Best,

Julie

Julie Barritt, M.A.
Doctoral Student
Counseling Psychology
University of Northern Colorado

APPENDIX E

AUTHOR PERMISSION TO USE THE SCS-SF

From: Filip Raes <filip.raes@ppw.kuleuven.be>
Subject: Re: SCS-SF
Date: November 13, 2015 at 7:09:18 AM MST
To: "Barritt, Julie" <Julie.Barritt@unco.edu>

Hi Julie,

Of course you can use the SCS-SF online. My only suggestion is that if you are interested in subscale scores, you'd better use the original full SCS, rather than the short form, given low alpha's of some subscales in the short form.

best wishes,

Filip

FREE ONLINE COURSE ON E-PSYCHOLOGY:
https://www.youtube.com/watch?v=wScRejeUAe8&feature=youtu.be

Filip Raes, PhD
Associate Professor
Faculty of Psychology and Educational Sciences
KU Leuven
Tiensestraat 102 (box 3712)
3000 Leuven | Belgium
T: ++32 (0)16/32.58.92
F: ++32 (0)16/32.60.99
E: filip.raes@kuleuven.be
W: http://ppw.kuleuven.be/home/english/research/clep/people/00035307
Twitter: @raziraes

On 11 Nov 2015, at 18:05, Barritt, Julie <Julie.Barritt@unco.edu> wrote:
Dr. Raes,

My name is Julie Barritt and I am a Counseling Psychology doctoral student at the University of Northern Colorado. I am currently in the process of developing my dissertation study and would like to use the SCS-SF. My study would be administered through a secure online survey program (Qualtrics) and I would love to include the SCS-SF in this format. I know on the website authorization is given to use the self-compassion scales for research purposes, but I was not sure if this was limited to strictly paper pencil format. I am writing you to ask your permission to use the SCS-SF in an online format and upload the SCS-SF to Qualtrics for the purposes of my study? Please let me know if you have any questions or concerns or need more information about my dissertation.

Thank you for your time and I look forward to hearing from you.

Best,

Julie

Julie Barritt, M.A.
Doctoral Student
Counseling Psychology
University of Northern Colorado

APPENDIX F

AUTHOR PERMISSION TO USE THE ESS

From: "Andrews, B" <B.Andrews@rhul.ac.uk>
Subject: RE: Experience of Shame Scale
Date: November 12, 2015 at 2:47:19 AM MST
To: "Barritt, Julie" <Julie.Barritt@unco.edu>

Dear Julie
I am happy for you to use the ESS in online formate for the purposes of your study. Attached is an electronic copy of the ESS with scoring information, and a copy of the original ESS paper with psychometric properties.
With best wishes

Bernice Andrews PhD FBPsS
Emeritus Professor of Abnormal Psychology
Royal Holloway University of London
Egham, Surrey TW20 OEX, UK

-----Original Message-----
From: Barritt, Julie [mailto:Julie.Barritt@unco.edu]
Sent: 11 November 2015 16:58
To: Andrews, B
Subject: Experience of Shame Scale

Dr. Andrews,

My name is Julie Barritt and I am a Counseling Psychology doctoral student at the University of Northern Colorado. I am currently in the process of developing my dissertation study and would like to use the ESS. My study would be administered through a secure online survey program (Qualtrics) and I would love to include the ESS in this format. I am writing you to ask your permission to use the ESS in an online format and upload the ESS to Qualtrics for the purposes of my study? Please let me know if you have any questions or concerns or need more information about my dissertation.

Thank you for your time and I look forward to hearing from you.

Best,

Julie

Julie Barritt, M.A.
Doctoral Student
Counseling Psychology
University of Northern Colorado

APPENDIX G

THE PATIENT HEALTH QUESTIONNAIRE – 9

The Patient Health Questionnaire – 9
(PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot or more than usual	0	1	2	3
9. Thoughts that you would be better off dead or hurting yourself in some way	0	1	2	3

For office coding 0 + + =

Total Score: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

APPENDIX H

DEMOGRAPHIC FORM

Demographic Form

Age: _____
Gender:
Male _____ Female _____ _____Other (please specify) _____

Level of Education:
Undergraduate _____ Graduate: MA_____ Doctoral:_____
Field of Study (Major):_____

Year in School: (If Undergrad)
Freshman _____ Sophomore _____ Junior _____ Senior_____

Ethnicity:
Caucasian _____ African American _____Asian_____ Latino/a_____
Other _____

APPENDIX I

RESOURCES IN THE COMMUNITY

UNIVERSITY of
NORTHERN COLORADO

As a participant in this study, in the event you experience any distress or discomfort by the questions asked in the questionnaires, you may be interested in available counseling/support services available in the community.

Resources in the Northern Colorado Area

UNC Psychological Services Clinic
McKee Hall Room 248
University of Northern Colorado Greeley, CO 80639
(970) 351-1645
Open Monday – Thursday 9:00 – 5:00
**Please note, this clinic is a training clinic and is not an emergency clinic. If you are in a state of an emergency please call 911.

University Counseling Center
Cassidy Hall, Campus Box 17
Greeley, CO 80639-0001
(970) 351-2496 during normal hours
(970) 351-2245 after hours Emergency Service

North Range Behavioral Health
928 12th St
Greeley, CO 80631
970-347-2120

National Suicide Hotline
1-800-SUICIDE (784-2433)

APPENDIX J

MANUSCRIPT FOR PUBLICATION

The Effects of Self-Compassion and Shame on the Relationship Between Perfectionism and Depression

Julie Ann Barritt

Basilia Softas-Nall

University of Northern Colorado

Abstract

The following study examined how self-compassion and shame affect the relationship between adaptive/maladaptive perfectionism and depression in order to determine future theoretical, research, and clinical implications. Hierarchical multiple regression was used to examine the predictive role of adaptive/maladaptive perfectionism, shame, and self-compassion on depression. This study included a sample size of 226 undergraduate and graduate students from a university in the Rocky Mountain regions. Results from the multiple regression analysis found maladaptive perfectionism was a significant predictor of depression (β = .540, p < .01), which supported findings from previous research. When shame and self-compassion were included, results indicated self-compassion (β = -.257, p < .01) and shame (β = .382, p < .01) were full mediators in the relationship between maladaptive perfectionism (β = .035, p = .707) and depression. Interestingly, adaptive perfectionism was found to act as a suppressor variable in this study; which provided important theoretical and methodological implications for future research. Overall, results emphasized the importance of targeting decreasing shame and increasing self-compassion for those with depression and maladaptive perfectionistic behaviors and beliefs.

Key Words: Adaptive Perfectionism, Maladaptive Perfectionism, Shame, Self-Compassion, Depression

Depression has increasingly gained more attention throughout the world due to its pervasive negative effects. According to the World Health Organization (WHO, 2015) depression is the leading cause of disability worldwide. The need for research to identify causal/protective factors and treatment indicators of depression has never been more imperative. Contributing to this body of research are studies identifying a positive correlation between depression and perfectionism (Cheng et al., 2015; Macedo et al., 2015; Malinowski, Veselka, & Atkinson, 2017), and shame (Costa, Marôco, Gouveia, & Ferreira, 2016; Tran & Rimes, 2017). Similarly, studies have identified a negative correlation between self-compassion and depression (Arimitsu & Hofmann, 2015; Friis, Johnson, Cutfield, & Consedine, 2016; Podina, Jucan, & David, 2015; Stephenson, Watson, Chen, & Morris, 2017), indicating self-compassion may be a possible protective factor or treatment indicator to help decrease symptoms of depression. In fact, recent literature has found self-compassion mediates the relationship between shame and depression (Castilho, Carvalho, Marques, & Pinto-Gouveia, 2017).

Only recently (Mehr & Adams, 2016) has maladaptive perfectionism and self-compassion been examined together in their relationship with depression, with findings showing self-compassion partially mediates the relationship between maladaptive perfectionism and depression. Yet, no study has examined the relationship between both forms of perfectionism (adaptive and maladaptive) and self-compassion. There is a need to continue to examine the constructs of perfectionism, self-compassion, and shame together to determine if self-compassion could act as a protective factor against shame and depression for individuals with perfectionism. Additionally, the relationship between

adaptive perfectionism and self-compassion, shame, and depression has yet to be thoroughly examined in previous research.

Perfectionism

Perfectionism and its effects on mental health have been researched since the 1970's. Overall, perfectionism is often encouraged and tolerated in the United States (U.S.) and cultures around the world. People who are able to meet high standards are often rewarded; this is apparent in business (promotions, pay raises, etc), academics (graduation, grades, GPA, awards, etc), and sports (trophies, pay raises, etc), among other domains (Beiling, Israeli, & Antony, 2004). While striving to improve one's performance can be adaptive and often leads to success and accomplishments, it can also lead to a perceived need to be *perfect* to be successful and accepted.

Perfectionism has been found to be a stable construct related to personality (Ashby, Slaney, Noble, Gnilka, & Rice, 2012; Cheng et al., 2015). Participants of the Ashby et al. (2012) study even identified that they felt unable to give up their perfectionistic beliefs and behaviors because it was so "ingrained or such a basic part of their personality…" (p. 332). Furthermore, individuals with perfectionism often strive to avoid mistakes and are acutely aware of personal stressors; which individuals with maladaptive perfectionism are quick to judge as catastrophic failures, while individuals with adaptive perfectionism are able to be more accepting of their mistakes (Hewitt & Flett, 1993).

Adaptive perfectionism. Lo and Abbott (2013) conducted a thorough review of perfectionistic literature and based on Hamachek's (1978) original work, described adaptive (or normal) perfectionists, as "those who strive for high standards, yet retain the

ability to feel accomplished and satisfied when those standards are met. They allow for minor mistakes in their work and are flexible in their pursuit for success" (Lo & Abbott, 2013, p. 97). A likely contributing process that helps distinguish between adaptive and maladaptive perfectionism, is the evaluation process individuals engage in after a performance. Unlike maladaptive perfectionists, adaptive perfectionists may not have an excessively self-critical evaluation process, and therefore do not ruminate about their performance (Beiling et al., 2004). The lack of excessive and critical self-evaluation could also explain why adaptive perfectionism often report higher scores of self-efficacy, self-esteem, life satisfaction, high internal locus of control, and positive well being (Chen, et al., 2016; Ganske & Ashby, 2007; Periasamy & Ashby, 2002; Rice & Slaney, 2002; Suh, Gnilka, & Rice, 2017); lower levels of depression and anxiety (Macedo et al., 2015; Mathew, Dunning, Coats, & Whelan, 2014); lower levels of shame (Fedewa, Burns, & Gomez, 2005; Pirbaglou, et al., 2013) and better emotional regulation than maladaptive perfectionists (Richardson, Rice, & Devine, 2014).

As previously stated, adaptive perfectionists have shown to report lower levels of anxiety and depression (Macedo et al., 2015; Mathew et al., 2014). Yet, other studies have found contradictory findings, with a few showing no relationship between adaptive perfectionism and depression (Beiling et al., 2004; Rice, Ashby, & Slaney, 1998) and another finding a positive correlation between adaptive perfectionism and depression proneness (Enns, Cox, & Clara, 2002). Based on these findings, it is reasonable to question whether other factor(s), such as self-compassion, could contribute to the prevention of depression in individuals who can be described as adaptive perfectionists.

Maladaptive perfectionism. Lo and Abbott (2013), based on Hamachek's (1978) original work, describe maladaptive (or neurotic) perfectionists as "those who set unrealistically high standards and allow relatively little margin for error. They are constantly concerned about disappointing others and hold the perception that they never seem to do things good enough" (Lo & Abbott, 2013, p. 97-98). Inherent within maladaptive perfectionism is a critical self-evaluation process that leads to dissatisfaction with one's abilities and discrepancy between one's standards and performance (Stoeber, Chesterman, & Tarn, 2010). Their highly critical self-evaluative process leads to feelings of vulnerability and inferiority and puts the individual in a cycle of striving for perfection while never being satisfied with one's performance (Blatt, 1995; Slade & Owens, 1998).

Research has consistently found maladaptive perfectionism to be correlated with psychopathology and psychological distress (e.g., Blatt, 1995; Cheng et al., 2015; Enns, et al., 2002; Macedo et al., 2015). Specifically, it has been connected to: low self-esteem (Chen et al., 2016), insomnia (Vincent & Walker, 2000) obsessive-compulsive disorder (Rice & Pence, 2006), repetitive negative thinking (Macedo et al., 2015), eating disorder behaviors (Reilly, Stey, & Lapsley, 2016; Wang & Li, 2017), rumination (Harris, Pepper & Maack, 2008; van der Kaap-Deeder, et al., 2016), hopelessness (Rice, Vergara, & Aldea, 2006), and substance abuse (Blatt, 1995). Of particular importance to the purpose of this study, maladaptive perfectionism has been linked to increase levels of shame (Ashby, Rice, & Martin, 2006; Malinowski et al., 2017) depression (Cheng et al., 2015; Macedo et al., 2015; Malinowski et al., 2017; Sherry, Richards, Sherry & Stewart, 2014; Tran & Rimes, 2017), and poor academic adjustment and performance (Rice et al., 2006).

Self-Compassion

Common experience indicates people are often more critical and unkind towards their own performance and appearance than others (Neff, 2003b). Individuals that are self-critical often need frequent external validation (Wei, Mallinckrodt, Larson, & Zakalik, 2005) and tend to focus on and exaggerate their own experience, which isolates them from others (Mikulincer, Shaver, & Pereg, 2003). Self-compassion includes being able to be kind to oneself in the face of failure, and identify personal shortcomings as part of the human experience (Neff, 2003b).

Self-compassion originated from Buddhist philosophy and includes taking a positive and caring emotional stance towards oneself while holding inadequacies in a balanced awareness (Neff, 2003a). The positive mental state inherent within self-compassion could act as a protective factor against various psychopathologies. In fact, self-compassion has been found to have a negative correlation with depression (Arimitsu & Hofmann, 2015; Friis et al., 2016; Podina et al., 2015; Stephenson et al., 2017), anxiety (Arimitsu & Hofmann, 2015; Stephenson et. al., 2017), shame (Johnson & O'Brien, 2013; Williams, 2015) self-criticism (Ehret, Joormann, & Berking, 2014), rumination (Krieger, Altenstein, Baettig, Doerig, & Holtforth, 2013; Williams, 2015), and avoidance of behaviors and cognitions (Krieger et al., 2013). A longitudinal study examining the protective factors of self-compassion was examined in a sample of adolescents and found data to support that self-compassion protects against negative affect and self-judgment (Marshall et al., 2015).

Self-compassion has been found to have a positive correlation with: life satisfaction (Neff, 2003a), happiness, positive affect (Arimitsu & Hofmann, 2015; Neff,

Kirkpatrick, & Rude, 2007), psychological well-being (Neff, 2004; Neff & Germer, 2013; Williams, 2015), social connectedness (Neff & McGehee, 2010; Neff et al., 2007), emotional intelligence, and self-determination (Neff, Hseih, & Dejitthirat, 2005). Furthering the interest into the positive effects of self-compassion on levels of functioning, studies have found that self-compassion is connected to better academic integration, adjustment, and performance amongst college students (Neff et al., 2007; Neff et al., 2005).

Shame

Tangney and Dearing (2002) describe shame as a deep, personal, painful emotion that has a lasting impact on the individual, their interpersonal relationships, and influences their behavior and self-identity. As an internal emotion of self-blame, shame is difficult to research because it is not observable by others and is often confused with feelings of guilt (Tangney & Dearing, 2002). Shame involves feelings of: worthlessness, powerlessness, disgust, inferiority, self-consciousness, and feeling small and exposed (Kim, Thibodeau, & Jorgensen, 2011; Tangney & Tracy, 2012). Feelings of shame also contribute to subsequent interpersonal behaviors; individuals who experience shame may wish to hide their inadequacies by withdrawing and isolating from others (Tangney & Tracy, 2012).

In regards to mental health, shame has consistently been found to be positively correlated with depression (Castilho, Pinto-Gouveia, & Duarte, 2016; Costa et al., 2016; Matos, Pinto-Goueia, & Duarte, 2013). Shame is also positively correlated with personality pathology (Schoenleber & Berenbaum, 2012), neuroticism, somatization, obsessive-compulsive disorder, psychoticism, paranoid ideation, interpersonal sensitivity,

anxiety, and phobic anxiety (Tangney & Dearing, 2002), rumination (Fontaine, Luyten, De Boeck, & Corveleyn, 2001; Joireman, 2004; Stuewig & McCloskey, 2005), submissive behaviors (Pinto-Gouveia, Matos, Castilho, & Xavier, 2014), and self-harm (Gilbert, McEwan, Bellew, Mills, & Gale, 2009). In addition to having a positive correlation with the above-mentioned psychological distress and disorders, evidence supports that the presences of psychopathology can lead to further bouts of shame (Tangney, Wagner, & Gramzow, 1992), which was especially evident in people with depression (Andrews, Qian, & Valentine, 2002). Interpersonally, shame was correlated with: decreased empathy, blaming, anger, and hostility (Tangney et al., 1992).

Perfectionism, shame, and depression and their effects have been studied for decades (e.g., Blatt; 1995; Macedo et al., 2015; Malinowski et al., 2017; Tangney & Dearing, 2002). Self-compassion, a relatively new construct to the field of psychology and research, has recently gained more attention due to its protective factors against psychopathology (Arimitsu & Hofmann, 2015; Castilho et al., 2017; Mehr & Adams, 2016; Stephenson et al., 2017; Williams, 2015). The need to further examine the positive effects of self-compassion is needed, especially whether self-compassion could mediate and protect against the onset of depression in individuals with both forms of perfectionism.

Social mentality theory supports why self-compassion and shame could mediate the relationship between perfectionism and depression through their impact on feelings of social belongingness or rejection. Furthermore, it clarifies why perfectionism can lead to maladaptive qualities due to self-criticism (Gilbert, 2005). Social mentality theory suggests that many social behaviors, drives, and roles have evolved over millions of

years. The ability of human beings to recognize and respond to various social roles is driven by both biological responses and complex cognitive processes.

> …by far the largest motivation underpinning human social competition is the desire for approval, to win a favored place in the minds of others, to stimulate positive emotions about us in the minds of others. Thus, we compete so that our parents will love us, our friends want us as allies, our bosses admire and support our talents, [and] our sexual partners desire us… (Gilbert, 2005, p. 318)

People compete for acceptance and belonging in order to avoid rejection, isolation and shame. Shame in particular is part of our social rank mentality because it is a self-conscious emotion that directly reflects our beliefs about our social acceptance, social standing, attractiveness, and reputation (Gilbert, 2002).

Shame develops within our social mentality based on our early experiences and messages received in early childhood. "Thus, if a child is constantly labeled as stupid and inadequate, this may be copied into both implicit (fear of others) and explicit self-referent systems. These can then act as sources of information how others are likely to treat [them]" (Gilbert, 2005, p. 324). Individuals who feel rejected and are told that they are inadequate develop schemas that are associated with feelings of rejection and shame. Throughout an individual's life, schemas continue to be reactivated during times of social interaction and similar feelings of shame can be activated as they engage in a critical self-evaluative process. Self-critical people attack themselves and hold contemptuous views of the self. They can feel harassed by their own thoughts, which can include "you must try harder, you lazy person" (Gilbert, 2005, p. 324).

Similar to the development of shame as described above by Gilbert (2005), perfectionism is also theorized to develop through parenting style that includes unrealistic high expectations and inconsistent affection based on performance (Hamachek, 1978;

Rice, Lopez & Vergara, 2005). Based in social mentality theory, it appears both perfectionism and shame both develop as part of parenting and are subsequently maintained by a highly critical self-evaluation process (Blatt, 1995; Gilbert, 2005; Slade & Owens, 1998) in order to win the approval of others (Gilbert, 2005). Furthermore, based on social mentality theory, self-criticism (a process often found in maladaptive perfectionists) activates the threat system due to feelings of shame, lack of perceived social acceptation, and fear of social rejection (Rice & Mirzadeh, 2000). These individuals have extreme difficulty finding self-compassion (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006) and their feelings of social rejection, and inferiority can lead to symptoms of anxiety (Gilbert, 2001) and depression (Cheung, Gilbert, & Irons, 2004; Gilbert, 1992). The relationship between perfectionism and depression has been strongly established (e.g., Cheng et al., 2015; Enns, et al., 2002; Macedo et al., 2015); social mentality theory proposes perfectionism leads to depression through feelings of shame and subsequent behaviors of isolation, anger, and feelings of social rejection (Gilbert, 2005). The lack of compassion for the self is often seen as the focus of psychotherapy for self-critical and individuals with perfectionism (Gilbert & Irons, 2005). Social mentality theory hypothesizes that compassion can have a reorganizing effect on psychological functioning, relationships, and social values (Gilbert & Procter, 2006). Self-compassion improves overall well-being through feelings of social security and belongingness (Gilbert & Irons, 2005), which help protect against feelings of social rejection. The purpose of this study was to answer the following research questions:

Q1 Do the different forms of perfectionism (i.e., adaptive & maladaptive) help explain a significant amount of variance in depression?

Q2 Does self-compassion and shame explain a significant amount of variance in depression?

Q3 Does self-compassion and shame mediate the relationship between adaptive/maladaptive perfectionism and depression?

Methodology

This study was a non-experimental correlational research design (Remler & Van Ryzin, 2010). The primary investigator used multiple regression, as described by Baron and Kenny (1986), to examine the mediating effects of self-compassion and shame on the relationship between adaptive/maladaptive perfectionism and depression. Upon approval from the primary investigator's University's Institutional Review Board, volunteer participants from the Rocky Mountain region were recruited via email. A total of 1000 student emails were gathered. Recruitment emails were distributed in the following manner: 300 emails were sent on day one, 300 on day two, and 400 on day three. Reminder emails were sent in the same ordered fashion after a three day laps from the original email. This cycle continued until all 1000 students received a total of three recruitment emails. Out of 1000 recruitment emails sent, 247 students responded (24.7% response rate). Of those that responded, 21 students dropped out of the study prior to completion, leaving a final sample size of $N = 226$.

Participation was voluntary, and participants were offered the opportunity to enter a drawing for one of three $25.00 gift card to Amazon. All survey instruments were administered electronically through the use of Qualtrics. After participants went to the survey package, they were directed to the informed consent document. Endorsement of the informed consent by clicking *continue* was required prior to starting the survey. Order effect was controlled for by randomizing the order the questionnaires were presented for

each participant. To help prevent missing data, a response to every item was required for each question; if participants wished to not answer, they could discontinue the survey without repercussion and still be entered into the drawing. All analyses were ran through SPSS version 23 (IBM Corp., 2013).

Participants

The sample for this study was recruited via convenience sampling at a University in the Rocky Mountain region. The sample consisted of 226 undergraduate (Freshman 18.1%; Sophomore 11.5%; Junior 13.7%; Senior 19.9%) and graduate (MA 22.6%; Doctoral 9.7%) students. There were 51 males, 172 females, three participants who identified as "other;" and mean age was 26.3 (9.6 *SD*). The sample consisted of 174 (77%) Caucasian, 11 (4.9%) African American, 5 (2.2%) Asian, 23 (10.2%) Latino/a, and 13 (5.8%) Other.

Instrumentation

Perfectionism Inventory. The PI is comprised of eight subscales (The Concern Over Mistakes; High Standards for Others; Need for Approval; Organization; Perceived Parental Pressure; Planfulness; Rumination; and Striving for Excellence) with items measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) (Hill et al., 2004). The scores derived from the eight subscales provide the score for the two higher order factors of the PI: Conscientious Perfectionism (adaptive perfectionism) and Self-Evaluative Perfectionism (maladaptive perfectionism), while the sum of all eight subscale provide the overall PI composite score (Hill et al., 2004). Specifically, scores from the High Standards for Others, Organization, Planfulness, and Striving for Excellence subscales make up Conscientious Perfectionism with higher score

equating to higher levels of Conscientious (adaptive) Perfectionism; and scores from the Concern over Mistakes, Need for Approval, Perceived Parental Pressure, and Rumination subscales make up Self-Evaluative Perfectionism with higher scores equating to higher levels of Self-Evaluative (maladaptive) perfectionism. No items are reverse coded. Overall, the PI has demonstrated adequate psychometric properties across studies (Beiling, et al., 2004; Broman-Fulkes, Hill, & Green, 2008; Hill et al., 2004; Hill, Huelsman, & Araujo, 2010) and was used to measure adaptive and maladaptive perfectionism in the current study. The PI maladaptive and adaptive subscales has an internal reliability of $\alpha = .954$ and $\alpha = .909$ respectively in this study.

Self-Compassion Scale – Short Form. The Self-Compassion Scale – Short Form (SCS-SF; Raes, Pommier, Neff, & Van Gucht, 2011) was developed based on the original Self-Compassion Scale (SCS; Neff, 2003a) and designed to measure the three main components of self-compassion: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. The Likert scale ranges from 1 *Never* to 5 *Always*, with a middle score of 3 *Sometimes*. Due to the poor internal consistency reliabilities for each subscale, it is not recommended that individual subscales be interpreted (Raes et al., 2011) and therefore individual subscales were not interpreted in this study. The SCS-SF has demonstrated consisted reliability and validity across studies (Neff, 2003a; Raes et al., 2011) and had an internal reliability of $\alpha = .857$ in this study.

The Experience of Shame Scale. The Experience of Shame Scale (ESS; Andrews et al., 2002) is a 25-item scale that was designed to measure characterological, behavioral, and bodily shame. Responses are recorded on a Likert scale from 1 *Not at all*

to 4 *Very much*. No items are reversed scored and higher scores are associated with higher levels of shame. Strong psychometric properties have been established and have held across studies (Andrews et al., 2002; Kelly, Zuroff, Shapira, 2009; Matos & Pinto-Gouveia, 2010; Resick et al., 2008) and had an internal reliability of $\alpha = .966$ in this study.

Patient Health Questionnaire-9. The Patient Health Questionnaire – 9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001) was used in this study to measure depression symptoms. The PHQ-9 is a 9-item self-report questionnaire that measures symptoms of depression based on the DSM-IV criteria. Participants rate statements on a four point Likert scale between 0 *Not at all* and 3 *Nearly every day*. Scores are added together for an overall score that represents the severity and frequency of depressive symptoms. The PHQ-9 has demonstrated consisted psychometric properties and is widely used across multiple countries (Eisenberg Nicklett, Roeder, & Kirz, 2011; Kroenke et al., 2001). The PHQ-9 had an internal reliability of $\alpha = .911$ in this study.

Data Analysis

Prior to running the analyses to answer the research questions, the researcher conducted descriptive analyses to obtain the reliability of the measures for this study, as well as additional descriptive information (e.g., mean scores, standard deviation, ranges, correlation matrix). Next, the primary researcher checked for assumptions of regression analysis. Specifically, multicollinearity was assessed through variance inflation factor (*VIF* < 10), homoscedasticity was assessed through visual inspection of scatter plots, and normality was assessed through visual examination of the distribution of the residuals and Shapiro-Wilkes value ($p < .05$ = non normal distribution). All assumptions were met with

the exception of the normality assumption. If the data failed to meet the required assumptions of normality, it is recommended to try various transformation techniques (i.e. log, square root, etc) to determine if a better fit of the data could be met (Tabachnick, & Fidell, 2007). The square-root transformation of the dependent variable depression found a better fit of the data, and therefore the square root transformed data were used in all analyses.

In order to analyze the date, the primary investigator conducted multiple regression analysis. Various researchers have suggested the use of multiple regression to test for mediating effects (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). The primary researcher followed the four recommended steps to determine if a variable acts as a mediator: 1) confirm there is a signification relationship between perfectionism (adaptive and maladaptive) and the depression, 2) confirm perfectionism (adaptive and maladaptive) is related to the mediators (shame and self-compassion), 3) confirm that the mediators (shame and self-compassion) are related to depression, and 4) confirm that the relationship between perfectionism (adaptive and maladaptive) and depression has reduced after adding the mediators (shame and self-compassion) into the equation (Frazier et al., 2004). Since several multiple regression analyses were ran with the same data, Bonferroni correction was used to help avoid making a Type I error. Desired significance level for the entire study is $\alpha = .05$; The Bonferroni correction lowered the significance level to .01 for each individual regression analysis (Pedhazer, 1997).

Results

Correlations between all continuous variables (maladaptive perfectionism, adaptive perfectionism, Experience of Shame Scale, Self-Compassion Scale-Short Form, and Patient Health Questionnaire-9) were computed (see Table 1).

Table 1

Correlations Between the Maladaptive Perfectionism and Adaptive Perfectionism Indices of The Perfectionism Inventory, Experience of Shame Scale, Self-Compassion Scale – Short Form, and PHQ-9

	The Perfectionism Inventory		SCS-SF	ESS	PHQ-9
	Mal Perf	Ad Perf			
Mal Perf	--	.394*	-.697*	.707*	.465*
Ad Perf		--	-.089	.118	-.028
SCS-SF			--	-.706*	-.570*
ESS				--	.603*
PHQ-9					--

Note. $*p < .01$; Mal Perf = Maladaptive Perfectionism, Ad Perf = Adaptive Perfectionism, ESS = Experience of Shame Scale, SCS-SF = Self-Compassion Scale, Short Form, PHQ-9 = Patient Health Questionnaire.

Multiple Linear Regression Analysis

This study used the aforementioned steps for mediation analysis while accounting for the effects of demographic variables (age, gender, race, and level of education). Race and level of education were effect coded prior to being entered in the regression model and are represented in all tables as vectors. All demographic variables were entered into the regression models in the first step so the effects could be controlled for on the predictor and mediating variables.

The first condition assessed was the predictive power of maladaptive/adaptive perfectionism on depression. The *R square change* value indicated that 23.4% of that variance in depression was uniquely accounted for by maladaptive/adaptive perfectionism. When looking at the impact of maladaptive ($\beta = .540$, $p < .001$) and

adaptive perfectionism (β = -.255, p < .001), the regression model showed both variables were significant predictors of depression at the .001 level.

The second condition assessed was the predictive power of maladaptive/adaptive perfectionism on shame and self-compassion. In regards to the predictive power of maladaptive/adaptive perfectionism on shame, the *R square change* value indicated that 50.9% of the variance in shame was uniquely accounted for by maladaptive/adaptive perfectionism. When looking at the impact of maladaptive (β = .794, p < .001) and adaptive perfectionism (β = -.206, p < .001), the regression model showed both variables were significant predictors of shame at the .001 level.

In regards to the predictive power of maladaptive/adaptive perfectionism on self-compassion, the *R square change* value indicates that 49.5% of the variance in self-compassion was uniquely accounted for by maladaptive/adaptive perfectionism. When looking at the impact of maladaptive (β = -.786, p < .001) and adaptive perfectionism (β = .225, p < .001), the regression model showed both variables were significant predictors of self-compassion at the .001 level.

The third condition assessed was the predictive power of shame and self-compassion on depression. The *R square change* value indicated that 35.2% of the variance in depression was uniquely accounted for by self-compassion and shame. When looking at the impact of self-compassion (β = -.269, p < .001) and shame (β = .386, p < .001), the regression model showed both variables were significant predictors of depression at a .001 significance level.

Finally, the last condition assessed was the change in the predictive power of maladaptive/adaptive perfectionism on depression when including self-compassion and

shame in the regression model (see Table 2). The *R square change* value indicated that 23.4% of the variance in depression was uniquely accounted for by maladaptive and adaptive perfectionism, while and additional 13% was uniquely accounting for by shame and self-compassion, both of which were statistically significant ($p < .001$). When looking at the impact of maladaptive perfectionism ($\beta = .035$, $p = .707$) and adaptive perfectionism ($\beta = -.118$, $p = .051$), the regression model showed both variables were no longer significant predictors of depression when self-compassion ($\beta = -.257$, $p = .002$) and shame ($\beta = .382$, $p < .001$) were included in the model, whereas both shame and self-compassion remained significant predictors of depression.

Table 2

Hierarchical Regression Results for Model Explaining Maladaptive Perfectionism, Adaptive Perfectionism, Self-Compassion, Shame, and Depression

Explanatory Variable	*B*	SE *B*	*β*	*t* value	*p* value	Adj R^2	*F* change
Step 1 - Demographics						.058	2.703*
Step 2						.424	24.997**
Mal Perf	.002	.005	.035	.376	.707		
Ad Perf	-.009	.005	-.118	-1.960	.051		
Self- Comp	-.041	.013	-.257	-3.149	.002*		
Shame	.026	.006	.382	4.627	.000**		

Note: N = 226. *$p < .01$ **$p < .001$; Ed 1 & Ed 2 = Effect Coding of Level of Education, Eth1, Eth2, Eth 3, & Eth4 = Effect Coding of Ethnicity; Mal Perf = Maladaptive Perfectionism, Ad Perf = Adaptive Perfectionism; Self-Comp = Self-Compassion

Suppressor Variable – Post Hoc Analyses

Results from the correlation matrix showed adaptive perfectionism is only significantly correlated with maladaptive perfectionism and not with any other predictor variable or the dependent variable, yet results found it is a significant predictor of depression, self-compassion, and shame in all regression models. This discrepancy indicated adaptive perfectionism is acting as a suppressor variable and accounting for

irrelevant variance in the regression model that is actually attributed by maladaptive perfectionism. Smith, Ager, and Williams (1992) describe a suppressor variable as when a predictor variable is not correlated with the criterion (depression) but is correlated with one or more predictor variables (maladaptive perfectionism), and is appearing as a significant predictor of the criterion (depression).

There are several ways to identify a suppressor variable, with no clear consensus within the field of statistics of which is the best or preferred method (Ludlow & Klein, 2014). Results indicated that when maladaptive perfectionism was excluded from the model, adaptive perfectionism was no longer a significant predictor of shame, self-compassion, or depression (see Table 3). Suppressor variables can also be identified when the absolute value of the partial correlation is "considerably larger" than the absolute value of the zero-order correlation (Ludlow & Klein, 2014, p. 20). An examination of the partial correlations with the zero-order correlation (see Table 4) further support that adaptive perfectionism is acting as a suppressor variable as the partial correlation for each model was considerable larger than the zero-order correlation.

Table 3

Post Hoc Hierarchical Regression Results for Model Explaining Adaptive Perfectionism, Self-Compassion, Shame, and Depression

Explanatory Variable	*β*	*t* value	*p* value	Adj R^2	*F* change
IV: Ad Perf					
Mediators: SC and Shame					
DV: Depression					
Step 1 - Demographics				.058	2.703*
Step 2				.426	69.774**
Ad Perf	-.107	-2.033	.043		
Self- Comp	-.270	-3.660	.000**		
Shame	.396	5.361	.000**		
IV: Ad Perf					
DV: SC					
Step 1 – Demographics				.012	1.344
Step 2				.013	1.148
Ad Perf	-.074	-1.072	.285		
IV: Ad Perf					
DV: Shame					
Step 1 – Demographics				.008	1.236
Step 2				.013	1.958
Ad Perf	.096	1.399	.163		

Note: N = 226. *$p < .01$ **$p < .001$; Demographics = age, gender, ethnicity, and level of education; Ad Perf = Adaptive Perfectionism; Self-Comp = Self-Compassion

Mediation

The final research question hypothesized self-compassion and shame would mediate the relationship between adaptive/maladaptive perfectionism and depression. Table 5 provides the analysis and steps necessary to test for mediation. The hypothesized relationship proposed, as maladaptive perfectionism increased, shame would increase, self-compassion would decrease, and depression levels would increase. Similarly, as adaptive perfectionism increased, shame would decrease, self-compassion would increase, and depression levels would decrease. Finally, for shame and self-compassion to be considered mediators, the predictive ability of maladaptive/adaptive perfectionism

on depression needed to significantly decrease. Findings support part of the proposed hypotheses.

Table 5

Testing Mediating Effects of Shame and Self-Compassion Using Multiple Regression

Testing Steps	*B*	SE *B*	*β*
Step 1			
Outcome: Depression			
Predictors:			
Mal Perf	.027	.003	.540**
Ad Perf	-.020	.005	-.255**
Step 2a			
Outcome: Shame			
Predictors:			
Mal Perf	.591	.038	.794**
Ad Perf	-.233	.058	-.206**
Step 2b			
Outcome: Self-Comp			
Predictors:			
Mal Perf	-.251	.017	-.786**
Ad Perf	.109	.025	.225**
Step 3			
Outcome: Depression			
Mediators:			
Self-Comp	-.041	.013	-.257*
Shame	.026	.006	.382**
Predictors:			
Mal Perf	.002	.005	.035
Ad Perf	-.009	.005	-.118

Note: N = 226. *$p < .01$, ** $p < .001$

When not including shame and self-compassion in the regression model, maladaptive perfectionism explained a significant amount of variance in depression ($\beta = .540$, $p < .001$). When shame and self-compassion were included in the regression model, maladaptive perfectionism no longer explained a significant part of variance in depression ($\beta = .035$, $p = .707$); while shame ($\beta = .382$, $p < .001$) and self-compassion ($\beta = -.257$, $p = .002$) were still significant predictors. A test of significance proposed by Kenny, Kashy, and Bolger (1998) was conducted and results found the change between the models was statistically significant ($p < .01$). These results support the hypothesis that

self-compassion and shame act as full mediators between maladaptive perfectionism and depression.

Conclusion

The World Health Organization (2015) reported depression as the leading cause of disability worldwide. Results from this study hope to provide implications for lowering depression. While multiple factors can lead to depression, one such factor, perfectionism, has been repeatedly found to have a strong positive correlation with depressive symptoms (Cheng et al., 2015; Limburg, Watson, Hagger, & Egan, 2016; Macedo et al., 2015; Malinowski et al., 2017). The purpose of this study was to identify possible mediating variables that help explain the relationship between adaptive and maladaptive perfectionism and depression in order to provide theoretical, treatment, and research implications.

Results from a bivariate correlation analysis showed maladaptive perfectionism was significantly negatively correlated with self-compassion, and significantly positively correlated with shame and depression. Only age was found to be a significant predictor of changes in depression and implied that younger individuals are more likely to have higher levels of depression. After the effects of demographic variables were accounted for, maladaptive perfectionism was found to be a statistically significant predictor of depression, which is congruent with past research (Cheng et al., 2015; Macedo et al., 2015; Malinowski et. al., 2017; Mehr & Adams, 2016; Sherry et al., 2014; Trans & Rimes, 2017). Individuals with higher levels of maladaptive perfectionism are likely to report higher levels of depression symptoms.

Results from the bivariate correlation analysis found a negative correlation between self-compassion and depression, and a positive correlation between shame and depression. Meaning, as self-compassion increases, depression decreases, and as shame increases, depression increases. These results were congruent with prior research, which has found a negative correlation between self-compassion and depression (Arimitsu & Hofmann, 2015; Castilho, et al., 2017; Friis et al., 2016; Mehr & Adams, 2016; Podina et al., 2015; Stephenson et al., 2017), and positive correlation between shame and depression (Castilho, et al., 2016; Costa et al., 2016; Matos et al., 2013). Results from the current study found that after accounting for all demographic variables, shame and self-compassion were significant predictors of depression. Meaning those with high levels of shame and low levels of self-compassion are more likely to experience depressive symptoms.

Finally, research question three examined the final step in determining mediation. Results found that maladaptive perfectionism was no longer significant predictor of depression after shame and self-compassion were included in the regression model; whereas, shame and self-compassion accounted for a significant portion of the variance in depression. Meaning individuals with maladaptive perfectionism experience depression mostly because of low levels of self-compassion and high levels of shame.

The results from this study support the theoretical assumption that maladaptive perfectionism is correlated to feelings of shame and less self-compassion, and that those feelings of shame with poor self-compassion is positively correlated with depression. A key feature of maladaptive perfectionism is a highly critical self-evaluative process (Slade & Owens, 1998; Blatt, 1995), which is very similar to the self-criticism

experienced through shame as proposed by Gilbert (2005). Social Mentality Theory would postulate that people strive for perfection for social desirability, social acceptance, and social ranking. When goals of social acceptance are perceived not to be met, individuals are likely to experience shame and subsequent depression as it is a reflection of their perceived lack of social desirability and standing with those important in their lives (Gilbert, 2005).

As previously discussed, adaptive perfectionism was found to act a suppressor variable in this study, which was an unexpected finding; however supports the inconsistencies found in prior research. Some studies have found a significant negative correlation between adaptive perfectionism and depression (Limburg et al., 2016; Macedo et al., 2015; Mathew et al., 2014). While other studies have found no relationship between adaptive perfectionism and depression (Beiling et al., 2004; Rice et al., 1998). The inconsistencies in research on the impact of adaptive perfectionism on mental health functioning warranted further investigation.

Adaptive perfectionism was only significantly correlated with maladaptive perfectionism, yet appeared to be a significant predictor of shame, self-compassion, and depression. While there is no consensus on how to define a suppressor variable, Pedhazur (1997) described suppressor variables as:

> … the inclusion in the equation of a seemingly useless variable, so far as prediction of the criterion is concerned, suppresses, or control for, irrelevant variance, that is, variance that it shares with the predictors and not with the criterion, thereby ridding the analysis of irrelevant variation, or noise – hence the name *suppressor variable* (Pedhazur, 1997, p. 186).

The results from post hoc analyses and examination of partial and zero-order correlations implies that when adaptive perfectionism was entered into a regression model with

maladaptive perfectionism, the variation of depression being reported as explained by adaptive perfectionism is actually irrelevant variation of the maladaptive perfectionism variable. In sum, it appears adaptive perfectionism is acting as a suppressor variable and is not actually correlated with, or a significant predictor of depression, self-compassion, or shame in this study.

Implications

According to Gilbert (2005), a key drive for people is social approval and acceptance, which is a component of perfectionism (Blatt, 1995). We learn at an early age through our parents and caretakers how to view ourselves through our accomplishments and messages we receive during times of success and failure. Results from this study support Social Mentality Theory. Individuals with maladaptive perfectionism have both an intrinsic self-criticism and belief that they must be perfect for others to approve of them. When individuals continuously feel as though they are failing they experience shame, which makes them aware of the risk of social rejection (Gilbert, 2005) and vulnerable to symptoms of depression.

Adaptive and Maladaptive Perfectionism

Research has continuously supported the two higher order factor structure of perfectionism: adaptive and maladaptive (e.g., Ashby et al., 2012; Hill et al., 2010; Limburg et al., 2016). Both factors have been theoretically thought of as separate constructs with similar characteristics (i.e. setting of high standards). The key distinguishing feature has been described through the difference in self-acceptance. Specifically, adaptive perfectionism is thought to allow for self-acceptance and satisfaction of one's performance (Rice & Dellwo, 2002), while maladaptive

perfectionism is thought to include a highly self-critical evaluative process with an inability to accept one's faults (Stoeber et al., 2010). Results from the current study support a theoretical overlap between the two constructs, as both were found to be positively correlated; yet both had different implications in their relationship to the mental health outcomes of shame, self-compassion and depression.

Results showed no significant relationship between self-compassion and adaptive perfectionism. This finding was unexpected given how adaptive perfectionism was theoretically different from maladaptive perfectionism through self-acceptance, which is a characteristic of self-compassion (Neff, 2003b). Self-compassion is described as encompassing three characteristics: self-acceptance, mindfulness, and identification with the human experience (Neff, 2003b). While self-compassion and adaptive perfectionism share self-acceptance, results from this study imply that this common quality is not enough to explain a significant correlation between self-compassion and adaptive perfectionism. Therefore, perhaps a measure that focuses on self-acceptance would provide more accurate understanding of adaptive perfectionism.

Due to inconsistent findings on the effects of adaptive perfectionism, it would also benefit future researchers to consider the possibility of suppressor variables when researching adaptive and maladaptive perfectionism in the same model. Perhaps measures that have less overlap between adaptive and maladaptive perfectionism would help isolate the effects of maladaptive and adaptive perfectionism. Furthermore, to help clearly delineate between the effects of adaptive versus maladaptive perfectionism, it is also recommended future research examine adaptive and maladaptive perfectionism in separate models to avoid the risk of misleading results.

Findings from previous studies have found inconsistent results regarding the relationship between adaptive perfectionism and psychopathology. Some studies have found a negative correlation with between adaptive perfectionism and depression (Limburg et al., 2016; Macedo et al., 2015; Mathew et al., 2014), while others have found no relationship (Beiling et al., 2004; Rice et al., 1998) including results from this study. When examining the differences between the aforementioned studies with conflicting results, the primary difference was found to be in how depression was measured. The majority of studies used either the FMPS or HMPS to measure perfectionism (Beiling et al., 2004; Limburg et al., 2016; Macedo et al., 2015; Rice et al., 1998); however, each one used a different survey to measure depression. This study used the PHQ-9 to measure depression; which, only has nine items based on the DSM-5 diagnostic criteria. The limited scope of depressive symptoms gathered through the PHQ-9 could have contributed to the limited findings between adaptive perfectionism and depression. It may behoove future researchers to consider a larger depression scale that captures symptoms of depression more thoroughly.

Some researchers have also suggested that perhaps the relationship between adaptive perfectionism and mental health functioning is not a linear relationship, which has been the primary way in which adaptive perfectionism has been studied. Adaptive perfectionism may have a curvilinear relationship with mental health; in other words, both high and low scores were linked to negative outcomes, while moderate scores were indicative of positive outcome, it would allow for the characteristics described as adaptive perfectionism to be present only within that moderate range of scores. Future

research ought to examine whether adaptive perfectionism has a curvilinear relationship with depression and other mental health outcomes (Hill et al., 2004).

Self-Compassion

Self-compassion was found to be significant predictor of depression in this study, which is congruent with prior research (Arimitsu & Hofmann, 2015; Castilho et al., 2017; Friis et al., 2016; Mehr & Adams, 2016; Podina et al., 2015; Stephenson et al., 2017), and supports the proposed theoretical implications that self-compassion acts as a protective factor against depression in individuals with maladaptive perfectionism. Gilbert (1989) proposed that the self-soothing system in the brain is activated by social security, which is associated with feelings of acceptance. Meanwhile, Neff (2003b) has also described the components of self-compassion as a self-soothing strategy as it allows for self-acceptance, mindfulness of one's turmoil without over-identification with it, and connection to others through the common human experience. Results from this study support this connection between self-compassion and a decrease in negative mental health outcomes potentially through self-soothing qualities of acceptance and feelings of security.

Practice Implications

Results from this study showed a significant positive correlation between adaptive and maladaptive perfectionism. These findings suggest individuals are likely to experience both adaptive and maladaptive perfectionism characteristics, which aligns with the theoretical concept of perfectionism. To help prevent the onset of psychopathology that often accompanies maladaptive perfectionism, individuals with perfectionism tendencies may benefit from treatment that helps enhance the adaptive

aspects of perfectionism; including: setting of high standards, confidence in one's ability to reach those high standards, acceptance of one's performance, and ability to move past perceived failures without rumination or self-criticism.

Additional practice implications include focusing treatment on various constructs that mediate the relationship between maladaptive perfectionism and psychopathology. Specifically, shame and self-compassion were found to be full mediators between maladaptive perfectionism and depression. Meaning for those with high maladaptive perfectionism and depression, they are most likely experiencing depression as a result of high levels of shame with limited self-compassion. Treatment aimed at decreasing shame and increasing self-compassion may be instrumental in treating depression for individuals with high maladaptive perfectionism. Counseling psychologists can help people handle their feelings of personal failure, shame, and self-criticism with self-kindness, mindfulness, and identifying with the common human experience on being imperfect. Various treatments such as, Gilbert's (2010) Compassion-Focused Treatment (CFT), and Neff and Germer's (2013) Mindful Self-Compassion (MSC) have been designed and found to be effective in increasing levels of self-compassion in both clinical and non-clinical populations. These approaches may prove especially useful for the counseling psychologists working with individuals with maladaptive perfectionism, shame, and depression.

Social Mentality Theory theorizes that perfectionism and shame develop as a result of parenting styles and early parent-child interactions (Enns et al., 2002; Gilbert, 2005; Harvey, Moore, & Koestner, 2017; Oros, Iurno, & Serppe, 2017; Reilly et al., 2016), which may also imply a potential area of treatment to help prevent the

development of maladaptive perfectionism, shame, and depression. Counseling psychologists can assist new parents identify their *other oriented perfectionism* that may impact their standards for their child/children, and identify how their expectations were similar to familial patterns and rules passed down through various generations. Identifying their own experiences that led to shame versus self-compassion can help new parents identify parenting methods to foster greater self-compassion and acceptance of a child's behavior/performance.

Counseling psychologists in college counseling centers are likely to interact with college students who struggle with maladaptive perfectionism, depression, and suicidal ideation. Results of this study indicate treatment ought to target reducing shame and increasing self-compassion in order to help decrease depression in college students with maladaptive perfectionistic tendencies. Self-compassion would be an ideal treatment goal, as it allows the individual to practice self-kindness and acceptance. Self-compassion helps decrease fear of rejection and shame responses by allowing one to identify similarities between self and others, while accepting personal faults with mindfulness and compassion. If one is able to be accepting of personal faults, they are more likely to identify their strengths and gain a sense of social acceptance and belonging (Gilbert, 2005). Therefore, when working with college students with perfectionistic behaviors/beliefs, it would be beneficial if treatment focused on an internal locus of control, less self/other evaluative process, and increased self-compassion. Acceptance and Commitment Therapy (Forman, Herbert, Moitra, Yeomans, & Gellar, 2007), Compassion-Focused Treatment (CFT; Gilbert, 2010), and Mindful Self-Compassion

(MSC; Neff & Germer, 2013) have all been found to have positive outcomes in attaining self-acceptance and compassion when treating depression.

Limitations

The current study sampled graduate and undergraduate students at a single university in the Rocky Mountain region and consisted primarily of Caucasians, females, and undergraduate students. Due to the limited representation of diversity in the sample of this study, results were not representative of how the constructs of this study differ across cultures. Therefore the generalizability of the results is limited. Participation in this study was voluntary and therefore the sample may only include individuals interested in the topic. Conclusions about causality between the variable could not be established as a result of the research design, sample recruitment method, and lack of control group.

This study examined perfectionism, shame, self-compassion, and depression through survey research, which captures the constructs at a specific moment in time. All constructs were measured as trait based constructs with the absence of context. Therefore, there is no way of ensuring true levels of perfectionism, shame, self-compassion, and depression were reported if the severity varies based on the situation. Other measures of shame ought to be considered for future research that wish to capture chronic characterological shame. Similarly, the SCS-SF does not allow for in-depth analysis of the various factors involved in self-compassion. The inclusion of the original SCS would prove beneficial in future research to allow for a deeper understanding of which factors of self-compassion mediate the relationship between maladaptive perfectionism and depression. Since all data were collected through self-report surveys, there is no way to guarantee participants were truthful in their responses or that wanting to respond in a

socially desirable way did not influence them. Future research ought to include a social desirability scale and include it as a covariate in the model to help control for the effects of social desirability.

Due to multiple regression analyses to answer several hypotheses, Bonferoni correction was used, dropping the significance level to .01. As a result, true significant results could have been masked in the current study (Pedhazur, 1997). Future research may want to consider conducting multiple studies to avoid using a Bonferoni correction Also, due to violation of the normality of residuals assumption of regression analysis, the square root transformation of the outcome variable was used in all regression models (Field, 2013). This transformation limited the interpretation of results as it artificially changed the data to provide a normal distribution in order provide increased accuracy of parameter estimates and significance testing (Field, 2013). Future researchers ought to consider the risks and benefits of using skewed data versus transformed data when considering how to handle skewed data. Furthermore, a more diverse sample may help prevent skewed data and also allow for more generalizability of results

Conclusion

Maladaptive perfectionism has been heavily researched thus far, yet, in comparison, little has been done on adaptive perfectionism. Therefore, the goal of this study was to address this gap in the literature and examine both forms of perfectionism, and their relationship with shame, self-compassion, and depression. Results from this study found support for part of the proposed hypotheses. Shame and self-compassion were found to be significant mediators in the relationship between maladaptive perfectionism and depression, while unexpectedly, adaptive perfectionism was found to

act as a suppressor variable in the proposed model. Important theoretical, methodological, and clinical implications were discussed. Overall, when treating individuals with depression who also exhibit high levels of maladaptive perfectionism, counseling psychologists ought to target lowering their shame and increasing their self-compassion.

References

Andrews, B., Qian, M., & Valentine, J. D. (2002). Predicting depressive symptoms with a new measure of shame: The Experience of Shame Scale. *The British Journal of Clinical Psychology*, *41*, 29.

Arimitsu, K., & Hofmann, S. G. (2015). Cognitions as mediators in the relationship between self-compassion and affect. *Personality and Individual Differences, 74*, 41-48.

Ashby, J. S., Rice, K. G., & Martin, J. L. (2006). Perfectionism, shame, and depressive symptoms. *Journal of Counseling and Development, 84*, 148-156.

Ashby, J., Slaney, R., Noble, C., Gnilka, P., & Rice, K. (2012). Differences between "normal" and "neurotic" perfectionists: Implications for mental health counselors. *Journal of Mental Health Counseling, 34*, 322-340. doi:10.17744/mehc.34.4.52h65w1n8l27r300

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. doi:10.1037/0022-3514.51.6.1173

Beiling, P. J., Israeli, A. L., & Antony, M. M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences, 36*, 1373-1385.

Blatt, S. J. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist, 50*, 1003-1020.

Broman-Fulks, J. J., Hill, R. W., & Green, B. A. (2008). Is perfectionism categorical or dimensional? A taxometric analysis. *Journal of Personality Assessment, 90,* 481-490.

Castilho, P., Carvalho, S. A., Marques, S., & Pinto-Gouveia, J. (2017). Self-compassion and emotional intelligence in adolescence: A multigroup mediational study of the impact of shame memories on depressive symptoms. *Journal of Child and Family Studies*, 1-10.

Castilho, P., Pinto-Gouveia, J., & Duarte, J. (2016). Two forms of self-criticism mediate differently the shame–psychopathological symptoms link. *Psychology and Psychotherapy: Theory, Research and Practice, 90,* 44-54.

Chen, L., Zhong, M., Cao, X., Jin, X., Wang, Y., Ling, Y., ... & Yi, J. (2016). Stress and Self-Esteem Mediate the Relationships between Different Categories of Perfectionism and Life Satisfaction. *Applied Research in Quality of Life*, 1-13.

Cheng, P., Dolsen, M., Girz, L., Rudowski, M., Chang, E., & Deldin, P. (2015). Understanding perfectionism and depression in an adult clinical population: Is outcome expectancy relevant to psychological functioning? *Personality and Individual Differences, 75,* 64-67.

Cheung, M., Gilbert, P., & Irons, C. (2004). An exploration of shame, social rank and rumination in relation to depression. *Personality and Individual Differences, 36,* 1143–1153.

Costa, J., Marôco, J., Gouveia, J. P., & Ferreira, C. (2016). Shame, self-criticism, perfectionistic self-presentation and depression in eating disorders. *International Journal of Psychology and Psychological Therapy, 16,* 315-328.

Ehret, A. M., Joormann, J., & Berking, M. (2014). Examining risk and resilience factors for depression: The role of self-criticism and self-compassion. *Cognition and Emotion*, 1-9. doi:10.1080/02699931.2014.992394

Eisenberg, D., Nicklett, E. J., Roeder, K., & Kirz, N. E. (2011). Eating disorder symptoms among college students: Prevalence, persistence, correlates, and treatment-seeking. *Journal of American College Health, 59,* 700-707.

Enns, M. W., Cox, B. J., & Clara, I. (2002). Adaptive and maladaptive perfectionism: Developmental origins and association with depression proneness. *Personality and Individual Differences, 33,* 921-935.

Fedewa, B. A., Burns, L. R., & Gomez, A. A. (2005). Positive and negative perfectionism and the shame/guilt distinction: Adaptive and maladaptive characteristics. *Personality and Individual Differences, 38,* 1609-1619. doi:10.1016/j.paid.2004.09.026

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage Publications.

Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51,* 115-134. doi:10.1037/0022-0167.51.1.115

Fontaine, J. R. J., Luyten, P., De Boeck, P., & Corveleyn, J. (2001). The test of self-conscious affect: Internal structure, differential scales and relationships with long-term affects. *European Journal of Personality, 15,* 449–463.

Forman, E. M., Herbert, J. D., Moitra, E., Yeomans, P. D., & Geller, P. A. (2007). A randomized controlled effectiveness trial of acceptance and commitment therapy and cognitive therapy for anxiety and depression. *Behavior Modification, 31,* 772-799.

Friis, A. M., Johnson, M. H., Cutfield, R. G., & Consedine, N. S. (2016). Kindness matters: A randomized controlled trial of a mindful self-compassion intervention improves depression, distress, and HbA1c among patients with diabetes. *Diabetes Care*, *39*, 1963-1971.

Ganske, K., & Ashby, J.S. (2007). Multidimensional perfectionism and career decision making self efficacy. *Journal of Employment Counselling, 44,* 17–28. doi:10.1002/j.2161-1920.2007.tb00021.x

Gilbert, P. (1989). *Human nature and suffering*. Hove: Lawrence Erlbaum.

Gilbert, P. (1992). *Depression: The evolution of powerlessness.* Hove, UK, and New York: Erlbaum and Guilford Press.

Gilbert, P. (2001). Evolution and social anxiety: The role of social competition and social hierarchies. *Psychiatric Clinics of North America, 24,* 723-751.

Gilbert, P. (2002). Body shame: A biopsychosocial conceptualization and overview, with treatment implications. In P. Gilbert & J. Miles (Eds.), *Body shame: Conceptualization, research and treatment* (pp. 3-54). London: Brunner-Routledge.

Gilbert, P. (2005). Evolution and depression: Issues and implications. *Psychological Medicine, 36,* 287-297.

Gilbert, P. (2010). Compassion focused therapy: Distinctive features. New York, NY: Routledge/Taylor & Francis Group.

Gilbert, P., Baldwin, M. W., Irons, C., Baccus, J. R., & Palmer, M. (2006). Self-criticism and self-warmth: An imagery study exploring their relation to depression. *Journal of Cognitive Psychotherapy*, *20*, 183-200.

Gilbert, P., & Irons, C. (2005). Therapies for shame and self-attacking, using cognitive, behavioral, emotional imagery and compassionate mind training. In P. Gilbert (Ed.), *Compassion: Conceptualizations, research and use in psychotherapy* (pp. 263–325). London: Routledge.

Gilbert, P., McEwan, K., Bellew, R., Mills, A., & Gale, C. (2009). The dark side of competition: How competitive behavior and striving to avoid inferiority are linked to depression, anxiety, stress and self-harm. *Psychology and Psychotherapy: Theory, Research and Practice*, *82*, 123–136

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353.

Hamachek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology, 15,* 27-33.

Harris, P. W., Pepper, C. M., & Maack, D. J. (2008). The relationship between maladaptive perfectionism and depressive symptoms: The mediating role of rumination. *Personality and Individual Differences, 44*, 150-160. doi:10.1016/j.paid.2007.07.011

Harvey, B. C., Moore, A. M., & Koestner, R. (2017). Distinguishing self-oriented perfectionism-striving and self-oriented perfectionism-critical in school-aged children: Divergent patterns of perceived parenting, personal affect and school performance. *Personality and Individual Differences*, *113*, 136-141.

Hewitt, P. L., & Flett, G. L. (1993). Dimensions of perfectionism, daily stress, and depression: A test of the specific vulnerability hypothesis. *Journal of Abnormal Psychology, 102,* 58-65.

Hill, R. W., Huelsman, T. J., & Araujo, G. (2010). Perfectionistic concerns suppress associations between perfectionistic strivings and positive life outcomes. *Personality and Individual Differences, 48,* 584-589.

Hill, R. W., Huelsman, T. J., Furr, R. M., Kibler, J., Vicente, B. B., & Kennedy, C. (2004). A new measure of perfectionism: The perfectionism inventory. *Journal of Personality Assessment, 82,* 80-91. doi:10.1207/s15327752jpa8201_13

IBM Corp. (2013). IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

Johnson, E. A., & O'Brien, K. A. (2013). Self-compassion soothes the savage EGO-threat system: Effects on negative affect, shame, rumination, and depressive symptoms. *Journal of Social and Clinical Psychology, 32,* 939-963.

Joireman, J. (2004). Empathy and the self-absorption paradox II: Self rumination and self-reflection as mediators between shame, guilt, and empathy. *Self and Identity, 3,* 225–238.

Kelly, A. C., Zuroff, D. C., & Shapira, L. B. (2009). Soothing oneself and resisting self-attacks: The treatment of two intrapersonal deficits in depression vulnerability. *Cognitive Therapy and Research, 33,* 301–313. doi:10.1007/s10608-008-9202-1

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lidnzey (Eds.), *The Handbook of Social Psychology* (4th ed., pp. 233-265). New York: Oxford University Press.

Kim, S., Thibodeau, R., & Jorgensen, R. S. (2011). Shame, guilt, and depressive symptoms: A meta-analytic review. *Psychological Bulletin, 137*, 68-96.

Krieger, T., Altenstein, D., Baettig, I., Doerig, N., & Holtforth, M. G. (2013). Self-compassion in depression: Associations with depressive symptoms, rumination, and avoidance in depressed outpatients. *Behavior Therapy*, *44*, 501-513.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*, 606-613. doi:10.1046/j.1525-1497.2001.016009606.x

Limburg, K., Watson, H. J., Hagger, M. S., & Egan, S. J. (2016). The relationship between perfectionism and psychopathology: A meta-analysis: Perfectionism and psychopathology. *Journal of Clinical Psychology*, doi:10.1002/jclp.22435

Lo, A., & Abbott, M. J. (2013). Review of the theoretical, empirical, and clinical status of adaptive and maladaptive perfectionism. *Behaviour Change, 30*, 96-116.

Ludlow, L., & Klein, K. (2014). Suppressor variables: The difference between "is" versus "acting as." *Journal of Statistics Education*, *22*, 1-28.

Macedo, A., Soares, M. J., Amaral, A. P., Nogueira, V., Madeira, N., Roque, C., . . . Pereira, A. T. (2015). Repetitive negative thinking mediates the association between perfectionism and psychological distress. *Personality and Individual Differences, 72,* 220-224.

Malinowski, A. S., Veselka, L., & Atkinson, B. E. (2017). An investigation of vulnerability factors for depression. *Personality and Individual Differences, 107,* 126-130.

Marshall, S. L., Parker, P. D., Ciarrochi, J., Sahdra, B., Jackson, C. J., & Heaven, P. C. (2015). Self-compassion protects against the negative effects of low self-esteem: A longitudinal study in a large adolescent sample. *Personality and Individual Differences, 74,* 116-121.

Mathew, J., Dunning, C., Coats, C., & Whelan, T. (2014). The mediating influence of hope on multidimensional perfectionism and depression. *Personality and Individual Differences, 70,* 66-71. doi:10.1016/j.paid.2014.06.008

Matos, M., & Pinto-Gouveia, J. (2010). Shame as a traumatic memory. *Clinical Psychology and Psychotherapy, 17,* 299–312. doi:10.1002/cpp.659

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2013). Internalizing early memories of shame and lack of safeness and warmth: The mediating role of shame on depression. *Behavioural and Cognitive Psychotherapy, 41,* 479-493.

Mehr, K. E., & Adams, A. C. (2016). Self-compassion as a mediator of maladaptive perfectionism and depressive symptoms in college students. *Journal of College Student Psychotherapy, 30,* 132-145.

Mikulincer, M., Shaver, P. R., & Pereg, D. (2003). Attachment theory and affect regulation: The dynamic development and cognitive consequences of attachment-related strategies. *Motivation and Emotion, 27*, 77–102.

Neff, K. D. (2003a). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*, 223 – 250.

Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85 – 102.

Neff, K. D. (2004). Self-compassion and psychological well-being. *Constructivism in the Human Sciences, 9*, 27–37.

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology, 69*, 28-44.

Neff, K. D., Hseih, Y., & Dejitthirat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4*, 263–287.

Neff, K., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41*, 139-154.

Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*, 225–240.

Oros, L., Iuorno, O., & Serppe, M. (2017). Child perfectionism and its relationship with personality, excessive parental demands, depressive symptoms and experience of positive emotions. *The Spanish Journal of Psychology, 20*. doi:10.1017/sjp.2017.9

Pedhazur, E. J. (1997). *Multiple regression in behavioral research.* (3rd edition). New York, NY: Harcourt Brace College Publishers.

Periasamy, S., & Ashby, J.S. (2002). Multidimensional perfectionism and locus of control: Adaptive vs. maladaptive perfectionism. *Journal of College Student Therapy, 17*, 75–86.

Pinto-Gouveia, J., Matos, M., Castilho, P., & Xavier, A. (2014). Differences between depression and paranoia: the role of emotional memories, shame and subordination. *Clinical Psychology & Psychotherapy, 21*, 49-61.

Pirbaglou, M., Cribbie, R., Irvine, J., Radhu, N., Vora, K., & Ritvo, P. (2013). Perfectionism, anxiety, and depressive distress: evidence for the mediating role of negative automatic thoughts and anxiety sensitivity. *Journal of American College Health, 61*, 477-483.

Podina, I., Jucan, A., & David, D. (2015). Self-compassion: A buffer in the pathway from maladaptive beliefs to depression. An exploratory study. *Journal of Evidence-Based Psychotherapies, 15*, 97-109.

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion scale. *Clinical Psychology & Psychotherapy, 18*, 250-255. doi:10.1002/cpp.702

Reilly, E. E., Stey, P., & Lapsley, D. K. (2016). A new look at the links between perceived parenting, socially-prescribed perfectionism, and disordered eating. *Personality and Individual Differences, 88*, 17-20.

Remler, D. K., & Van Ryzin, G. G. (2010). *Research methods in practice: Strategies for description and causation*. Thousand Oaks, CA: Sage Publications.

Resick, P. A., Galovski, T. E., Uhlmansiek, M. O. B., Scher, C. D., Clum, G. A., & Young-Xu, Y. (2008). A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. *Journal of Consulting and Clinical Psychology, 76*, 243–258. doi:10.1037/0022-006X.76.2.243

Rice, K. G., Ashby, J. S., & Slaney, R. B. (1998). Self-esteem as a mediator between perfectionism and depression: A structural equations analysis. *Journal of Counseling Psychology, 45,* 304-314.

Rice, K. G., & Dellwo, J. P. (2002). Perfectionism and self-development: Implications for college adjustment. *Journal of Counseling and Development, 80,* 188-196.

Rice, K. G., Lopez, F. G., & Vergara, D. (2005). Parental/Social influences on perfectionism and adult attachment orientations. *Journal of Social and Clinical Psychology, 24*, 580-605. doi:10.1521/jscp.2005.24.4.580

Rice, K. G., & Mirzadeh, S. A. (2000). Perfectionism, attachment, and adjustment. *Journal of Counseling Psychology, 47*, 238-250.

Rice, K. G., & Pence, S. L. (2006). Perfectionism and obsessive-compulsive symptoms. *Journal of Psychopathology and Behavioral Assessment, 28*, 103-111.

Rice, K. G., & Slaney, R. B. (2002). Clusters of perfectionists: Two studies of emotional adjustment and academic achievement. *Measurement and Evaluation in Counseling and Development, 35*, 35-48.

Rice, K. G., Vergara, D. T., & Aldea, M. A. (2006). Cognitive-affective mediators of perfectionism and college student adjustment. *Personality and Individual Differences, 40*, 463-473.

Richardson, C. M., Rice, K. G., & Devine, D. P. (2014). Perfectionism, emotion regulation, and the cortisol stress response. *Journal of Counseling Psychology*, *61*, 110-118.

Sherry, S. B., Richards, J. E., Sherry, D. L., & Stewart, S. H. (2014). Self-critical perfectionism is a vulnerability factor for depression but not anxiety: A 12-month, 3-wave longitudinal study. *Journal of Research in Personality, 52*, 1-5. doi:10.1016/j.jrp.2014.05.004

Schoenleber, M., & Berenbaum, H. (2012). Shame regulation in personality pathology. *Journal of Abnormal Psychology*, *121*, 433-446.

Slade, P. D., & Owens, R. G. (1998). A dual process model of perfectionism based on reinforcement theory. *Behavior Modification, 22*, 372–390.

Smith, R. L., Ager, J. W., & Williams, D. L. (1992). Suppressor variables in multiple regression/correlation. *Educational and Psychological measurement*, *52*, 17-29.

Stephenson, E., Watson, P. J., Chen, Z. J., & Morris, R. J. (2017). Self-compassion, self-esteem, and irrational beliefs. *Current Psychology*, 1-7.

Stoeber, J., Chesterman, D., & Tarn, T.A. (2010). Perfectionism and task performance: Time on task mediates the perfectionistic strivings-performance relationship. *Personality and Individual Differences, 48*, 458–462. doi:10.1016/j.paid.2009.11.02

Stuewig, J., & McCloskey, L. A. (2005). The relation of child maltreatment to shame and guilt among adolescents: Psychological routes to depression and delinquency. *Child Maltreatment, 10*, 324–336.

Suh, H., Gnilka, P. B., & Rice, K. G. (2017). Perfectionism and well-being: A positive psychology framework. *Personality and Individual Differences, 111*, 25-30.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. (5th Ed.). Boston, MA: Pearson Education Inc.

Tangney, J. P., & Dearing, R. L. (2002). *Shame and guilt.* New York: Guilford Press.

Tangney, J. P., & Tracy, J. L. (2012). Self-conscious emotions In: Leary M, Tangney JP, editors. *Handbook of self and identity (*2nd ed.). *New York: Guilford*, 446-478.

Tangney, J. P., Wagner, P., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology*, *101*, 469-478.

Tran, L., & Rimes, K. A. (2017). Unhealthy perfectionism, negative beliefs about emotions, emotional suppression, and depression in students: A mediational analysis. *Personality and Individual Differences, 110*, 144-147.

van der Kaap-Deeder, J., Soenens, B., Boone, L., Vandenkerckhove, B., Stemgée, E., & Vansteenkiste, M. (2016). Evaluative concerns perfectionism and coping with failure: Effects on rumination, avoidance, and acceptance. *Personality and Individual Differences, 101,* 114-119.

Vincent, N. K., & Walker, J. R. (2000). Perfectionism and chronic insomnia. *Journal of Psychosomatic Research, 49,* 349–354.

Wang, H., & Li, J. (2017). Positive perfectionism, negative perfectionism, and emotional eating: The mediating role of stress. *Eating Behaviors 26,* 45-49.

Wei, M., Mallinckrodt, B., Larson, L. M., & Zakalik, R. A. (2005). Adult Attachment, Depressive Symptoms, and Validation From Self Versus Others. *Journal of Counseling Psychology*, *52*(3), 368.

Williams, E. C. (2015). *Self-compassion and self-forgiveness as mediated by rumination, shame-proneness, and experiential avoidance: Implications for mental and physical health* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (Order No. 3727491).

World Health Organization (2015). *Depression.* Retrieved from http://www.who.int/mediacentre/factsheets/fs369/en/