

The Role Of Self-Compassion And Emotional Approach Coping In The Relationship
Between Maladaptive Perfectionism And Psychological Distress Among East Asian
International Students

A DISSERTATION
SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL OF THE
UNIVERSITY OF MINNESOTA
BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

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July, 2012

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Acknowledgement

It has been ten years since I embarked on a quest that meant redirecting my career path from architecture to psychology. The completion of this dissertation means the ending of this quest. It would not have been possible if not for a tremendous amount of help from a number of people.

I would like to foremost acknowledge my advisor, Dr. Thomas M. Skovholt, who always empowers me by recognizing my adventures and understanding my unique challenges, with unwavering support and patience. His caring, empathetic presence and good sense of humor make me feel grounded and hopeful, and laugh again, even in the most stressful times. Along with his Norwegian modesty, egalitarianism and integrity, his invaluable insights and gentle guidance have helped to shape both the professional and the person that I am today.

I am indebted to Dr. Patricia Veach, Dr. Gerald Fry, and Dr. Kay Thomas for their time and energy on this project as committee members. A special thank you goes to Dr. Veach for her willingness to serve as a dissertation committee chair, and her warmth and support during my doctoral studies. I greatly appreciate her keen and insightful feedback on this dissertation. I am also very thankful to my colleague, Ian Macfarlane, for his great contribution to this dissertation in sharing his expertise in statistics and research.

Most importantly, I would like to express my appreciation to my loving and caring family. My parents have blessed my life in far more ways than I or anyone deserves. My father, Chung Suk Seo, is a most caring and empathetic father who always validates my feelings and experiences, while helping me never give up my dreams. My

mother, Hwa Soon Choi, is the most adventurous and wise person that I've ever seen. She was the person who became the strongest support for my adventure and has always been standing by me. I am also indebted to my sister, Rak Won Seo, who is also my best friend. Although she is younger than me, her maturity and calmness make me admire and count on her.

Thanks to my friends and peers in Minnesota. I have grown as a person and counselor through the precious relationships I have with them. Specifically, I would like to thank Eunjoo Hwang and Jung Lee who are critical and influential figures in my personal growth, particularly during my early years in Minnesota. I am also grateful to Nancy Rogneby and her family for their loving care and support, and making me feel Minnesota is my second home.

Despite so many blessing in my life, I wish I had shared my excitement in this accomplishment with my loving grandmother from whom I had the greatest love, care and affection: "I am so fortunate to be your granddaughter and I miss you greatly."

Dedication

This dissertation is dedicated to my family and
in loving memory of my grandmother, Song Ja Koo

Abstract

This study investigated the mediating and moderating roles of self-compassion and emotional approach coping in the relationship between maladaptive perfectionism and psychological distress among East Asian international students. Data were collected through an online survey completed by 255 East Asian international students in a large public Midwestern university.

It was hypothesized that self-compassion and emotional approach coping would predict psychological distress, and would both mediate and moderate the relationship between maladaptive perfectionism and psychological distress among the sample of East Asian international students. Hierarchical regression analyses showed that maladaptive perfectionism and self-compassion were strong predictors for depression and anxiety for the sample of East Asian international students, while emotional approach coping did not contribute unique variance in the prediction of depression and anxiety.

An exploratory factor analysis for the Self-Compassion Scale yielded two factors: the Self-Compassion factor (i.e., Self-Kindness, Common Humanity, and Mindfulness), and the Self-Disrespect factor (i.e., Self-Judgment, Isolation, and Over-Identification). Additionally, emotional approach coping was not significantly correlated with psychological distress; thus, emotional approach coping did not serve as a mediator or a moderator. Taken together, the original model was revised to incorporate two Self-Compassion factors as separate mediators in the relationship between maladaptive perfectionism and psychological distress, with Emotional Approach Coping as an exogenous variable.

Results from Structural Equation Modeling (SEM) showed that Self-Disrespect partially mediated between maladaptive perfectionism and psychological distress. The finding indicates that East Asian international students with maladaptive perfectionism can alleviate psychological distress. They can do this by being less self-judgmental and socially isolated, and by not over-identifying with their own negative thoughts and emotions, which develops self-compassion. In addition, Self-Disrespect moderated the relationship between maladaptive perfectionism and psychological distress, indicating that East Asian international students with maladaptive perfectionism seem to suffer from greater psychological distress when experiencing high levels of Self-Disrespect (i.e., being self-judgmental, isolated, and over-identifying). Implications for counseling and future research directions are discussed.

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Chapter 1

Introduction

In the last three decades, a great deal of research has documented the influence of personality on psychological problems such as depression or anxiety. The findings have highlighted the critical role of personality factors in the development of psychological problems (Jorn et al., 2000). Particularly, specific traits such as dependency, autonomy, as well as perfectionism have received attention in understanding the mechanisms of psychological problems or disorders (Hewitt et al., 2003). Perfectionism is often viewed as a positive trait that drives individuals to strive for high personal standards, but a burgeoning body of research underscores aspects of perfectionism related to psychological problems such as depression, low self-esteem, suicidality, anxiety, obsessive-compulsive disorder, and eating disorders (Axtell & Newlon, 1993; Broday, 1988; Hamilton & Schweitzer, 2000; Hewitt & Dyck, 1986; Hewitt & Flett, 1991; Preusser, Rice, & Ashby, 1994).

Hamacheck (1978) emphasized the importance of distinguishing *normal perfectionists*, who strive for realistically high personal standards with self-regard, from *neurotic perfectionists*, who are preoccupied with concerns about mistakes or evaluations due to the fear of failing to meet excessive high expectations. Pacht (1984) viewed negative or harmful characteristics of perfectionism as “the insidious nature of perfectionism” (p. 387). Shaw and Segal (1999) highlighted that perfectionism may be one of the most robust predictors of suicidal ideation, even compared with hopelessness. However, considering perfectionism as a stable personality trait, perfectionists are reluctant to relinquish their high personal standards that may elicit aspired benefits and

rewards (Flett & Hewitt, 2002; Slaney, Rice & Ashby, 2002).). A burgeoning body of research has been conducted to explicate the contribution of perfectionism, a stable personality factor, to psychological difficulties in the presence of stress, focusing on the population of college students. Few studies, however, have examined the effects of perfectionism on psychological distress of international students who experience not only academic stress but also acculturative stress in adjusting to a new culture.

A specific line of research has focused on identifying possible mediators as underlying mechanisms between maladaptive perfectionism and psychological distress. The present study sought to investigate two newly introduced constructs, self-compassion and emotional approach coping, as mediators between maladaptive perfectionism and psychological distress. Self-compassion was developed from principles of Buddhism and Eastern healing practice. Neff (2003a) characterized self-compassion as having three basic components: (a) self-kindness, (b) common humanity, and (c) mindfulness. Growing evidence has demonstrated that self-compassion is negatively related to maladaptive perfectionism, anxiety, depression, self-criticism, and negative affect (Neff, 2003b; Neff et al., 2007). With the emphasis on positive functions of emotions, emotional approach coping was developed to assess one's ability to process and express emotions (Stanton, Kirk, Cameron, & Danoff-Burg, 2000).

Statement of the Problem

The present study sought to answer the following questions: 1) how does perfectionism, self-compassion, and emotional approach coping account for unique and shared variance in the prediction of psychological distress among East Asian international students? 2) how do self-compassion and emotional approach coping

mediate the relationship between maladaptive perfectionism and psychological distress among East Asian international students? 3) how do self-compassion and emotional approach coping moderate the relationship between maladaptive perfectionism and psychological distress among East Asian international students? Namely, this study will determine the extent to which maladaptive perfectionism, self-compassion, and emotional approach coping will predict psychological distress among East Asian international students. Next, this investigation also identified the mechanisms that underlie perfectionism and psychological distress as a function of self-compassion and emotional approach coping. Lastly, the present study examined the strength of the relationship between perfectionism and psychological distress with regard to self-compassion and emotional approach coping. To this investigator's knowledge, there is no research investigating the effect of self-compassion and emotional approach coping on psychological distress of East Asian international students. Accordingly, the nature of the current study is exploratory.

Significance of the Problem

Perfectionism has been addressed as one of underlying issues for depression and anxiety, particularly for college students (Blatt, 1995, Hamacheck, 1978; Pacht, 1984). A great deal of research, however, supports the notion that it is difficult to treat perfectionism due to clients' resistance to lowering the exacting standards and expectations for themselves (Blatt, Zuroff, Bondi, Sainslow, & Pilonis, 1998; Flett & Hewitt, 2002; Slaney, Rice & Ashby, 2002). Thus, in treating perfectionists, it is important to target other psychological constructs that play a crucial role in the relationship between perfectionism and psychological distress. In this regard, substantial

empirical research has been conducted to identify psychological variables that mediate the association between perfectionism and psychological distress.

In this respect, this present study explained whether self-compassion and emotional approach coping may serve as both a mediator and a moderator in the link between maladaptive perfectionism and psychological distress among East Asian international students. Quite a few empirical studies show that self-compassion has a significant, negative relationship with psychological distress such as anxiety and depression, as well as maladaptive perfectionism (Neff, 2003a; Neff, 2003b; Neff, Hsieh, & Dejitterat, 2005; Neff, Kirkpatrick, & Rude, 2007; Neff, Pisitsungkagarn, & Hsieh, 2008; Neff, Rude, & Kirkpatrick, 2007; Neff, & Vonk, 2009; Ying, 2009; Raes, 2010). In addition, emotional approach coping also can contribute to the reduction of psychological distress (Austenfeld, Paolo, & Stanton, 2006; Broderick, Junghaenel, & Schwartz, 2005; Iwamitsu, Shimoda, Abe, Tani, Okawa, & Buck, 2005).

Despite the extensive research on maladaptive perfectionism, there is a dearth of research examining the effects of perfectionism on psychological distress of international students who experience not only academic stress but also acculturative stress in adjusting to a new culture. In particular, Asian international students from collectivistic cultures tend to have high standards of performance with high parental expectations (Chao, 1994; Chao & Tseng, 2002; Mordkowitz & Ginsburg, 1987; Peng & Wright, 1994; Yee, 1992). A few studies found that many Asian international students reported maladaptive perfectionism which played a statistically significant role in predicting stress or depression (Nilsson, Butler, Shouse, & Joshi, 2008; Wei, et al., 2007).

One of the benefits of the present study is in expanding on an existing theoretical model of perfectionism. At this point, there is no known current research examining the framework of self-compassion and emotional approach coping with regard to perfectionism and psychological distress with Asian international students. Hopefully, the findings from the present study will increase research understanding and then strengthen the conceptualization and development of interventions in treating Asian international students struggling with maladaptive perfectionism.

Chapter 2

Literature Review

This chapter is a review of the existing conceptual and empirical literature for perfectionism, self-compassion, and emotional approach coping. In particular, the focus of this review is on perfectionism in the following areas: a) definitions of perfectionism, b) measurements of perfectionism, c) the evaluative nature of perfectionism, d) perfectionism and attachment, e) perfectionism and psychological distress, and f) perfectionism and culture. Additionally, self-compassion, and emotional approach coping are introduced and the empirical findings on these two newly developed constructs are reviewed, especially related to perfectionism and psychological distress.

Definitions of Perfectionism

Recently, through factor and cluster analyses of several perfectionism measures, perfectionism has been constructed to be multidimensional with both adaptive and maladaptive features (Slaney, Rice, Mobley, Trippi, & Ashby, 2001). Slaney and his colleagues (2001) also operationalized maladaptive perfectionism as perceived discrepancy, which implies the failure to measure up to one's expectation for performance. Such a predisposition elicits negative psychological outcomes, such as excessive concerns about making mistakes, procrastination, harsh self-evaluation, doubts about one's behaviors, worries about fulfilling unrealistic goals, and criticism by one's parents. This, in turn, leads to low self-esteem, obsessive compulsive disorders, and generalized anxiety (Johnson & Slaney, 1996).

On the contrary, adaptive perfectionism is viewed as positive striving, which places an emphasis on high personal standards and aspiring to excellence in

performance. Such attitudes in adaptive perfectionism are interpreted as motivational and encouraging. Also, adaptive perfectionists tend not to be discouraged by failure to meet their high standards, or experience intra-and interpersonal turmoil (Aldea & Rice, 2006). Although there is a tendency in the literature to focus on maladaptive perfectionism, the positive aspects of adaptive perfectionism can offer practicing psychologists a tool to reinforce the strength of clients (Rice & Ashby, 1998).

Different from such a category of perfectionism, Hewitt and Flett (1991) conceptualized perfectionism as another multidimensional phenomenon, consisting of self-oriented, other-oriented, and socially prescribed perfectionism. Self-oriented perfectionism is the inclination of an individual who pursues high self-standard of performance -“One of my goals is to be perfect in everything I do” (Chang & Rand, 2000, p. 129). On the other hand, other-oriented perfectionism is manifested in an individual who expects the performance of others to be perfect, for instance, “If I ask someone to do something, I expect it to be done flawlessly” (Chang & Rand, 2000, p. 129). Lastly, socially prescribed perfectionism is the tendency for an individual to believe that others expect they should be perfect.-“The people around me expect me to succeed at everything I do” (Chang & Rand, 2000, p. 129). Tapping these three aspects of perfectionism, Hewitt and Flett (1991) invented the measure Multidimensional Perfectionism Scale, which has been widely used.

According to Hewitt and Flett (1991), rather than other-oriented perfectionism, self-oriented and socially prescribed perfectionism might predominantly account for maladjustment because these two dimensions locate the focus of the excessively high standards on the individual. Failure to meet one’s ideal expectations causes feelings of

worthlessness and an overly critical evaluation. Likewise, such outcomes correspond to the case when an individual cannot measure up to others' high expectations. Hewitt and Flett (1991) opined that those who suffer from socially prescribed perfectionism are more likely to manifest maladjustment and suicidal behaviors, due to lack of controllability of others' view of themselves.

Measurement of Perfectionism

Frost Multidimensional Perfectionism Scale

The Frost Multidimensional Perfectionism Scale (FMPS; Frost, Marten, Lahart, & Rosenblate, 1990) was developed to measure different aspects of perfectionism. The FMPS has 35 items on a 5-point Likert scale (1 = disagree strongly, 5= agree strongly) and consists of the following six subscales: (a) Concern over Mistake (9 items; e.g., “ I should be upset if I make a mistake’), Personal Standards (7 items; e.g., “ I have extremely high goals”), Parental Criticism (5 items; e.g., “My parents never tried to understand my mistakes”), Parental Expectation (5 items; e.g., “ My parents have expected excellence from me”), Doubts About Actions (4 items; e.g., “Even when I do something very carefully, I often feel that it is not quite right”), and Organization (6 items; e.g., “ I try to be an organized person”) (Castro & Rice, 2003, p. 68). Internal consistency estimates of the FMPS have been reported ranging from .71 to .88 (Chang, 2000; Frost et al., 1990; Stober, 1998). Correlations between the FMPS subscales and measures of psychological distress (e.g., depression, self-esteem, or anxiety) confirm the criterion-related validity of the FMPS (Wei, Mallinkrodt, Russell, & Abraham, 2004).

Hewitt and Flett's Multidimensional Perfectionism Scale (MPS)

Hewitt and Flett (1991) developed the MPS to measure self-oriented, other-oriented, and socially prescribed perfectionism. Each subscale has 15 items on a 7-point Likert Scale (1= strongly disagree; 7 = strongly agree). Sample items are as follows: “When I am working on something, I cannot relax until it is perfect” (self-oriented perfectionism), “I have high expectations for the people who are important to me” (other-oriented perfectionism), and “I feel that people are too demanding of me” (socially prescribed perfectionism). A variety of studies have evidenced the multidimensional nature of the MPS, as well as adequate internal consistency and validity of the subscales (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Hewitt & Flett, 1991; Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991).

Almost Perfect Scale

The Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashbly, 2001) is designed to assess multidimensional aspects of perfectionism. The APS-R is composed of 23 items measured on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). The three subscales of the APS-R are Standards (7 items), Orders (4 items), as well as Discrepancy (12 items). Particularly, the Discrepancy scale is viewed as measuring maladaptive perfectionism, because the scale assesses the magnitude of one's subjective perception of failing to meet their personal performance standards (Slaney et al., 2001). Slaney and his colleagues (2001) also reported Cronbach's coefficient alphas: Standards (.85), Discrepancy (.92), and Order (.68).

Evaluative Nature of Perfectionism

Self-Criticism, Need for Approval, and Contingent Self-worth in

Perfectionism

Blatt (1995) claimed “Perfectionistic individuals experience depression that is focused primarily on self-worth and self-criticism; they berate, criticize, and attack themselves, and experience intense feelings of guilt, shame, failure, and worthlessness” (p. 1012). Blatt (1995) also highlights that with clinical and nonclinical samples, the empirical research findings evidence significant positive correlations between highly perfectionistic self-criticism and both chronic depression and a high risk for suicide. Also, self-criticism by maladaptive perfectionists may contribute to their reaction to stress with a helpless orientation, so they tend to downplay the importance of problem-focused coping (Dweck & Sorich, 1999). Furthermore, Dunkley, Zuroff, and Blankstein (2003) found empirical results that suggest that perfectionists with self-criticism perceive high levels of negative affect with a low level of positive effect. Thus, these individuals are more likely to be emotionally reactive to stress and criticism, which may result in adopting an avoidant coping style.

Wu and Wei (2008) conducted a study to investigate the mediating effect of validation from others and self on the relationship between perfectionism and negative mood. They regarded maladaptive perfectionism to be a kind of evaluative concerns perfectionism (EC perfectionism), while adaptive perfectionism was viewed as personal standards perfectionism (PC perfectionism), as claimed by Blankstein and Dunkley (2002). According to the literature review, EC perfectionism has a strong association with the need for approval from others (Wade, 1997), as well as fear of negative

evaluation (Hewitt & Flett, 1991), as opposed to PC perfectionism. On the other hand, those with PC Perfectionism are more capable of generating self-reinforcement, unlike those with EC perfectionism who tend to focus on their negative performance and self-criticize their own performance (Dunkley, Blanckstein, Halsall, Williams, & Winkworth, 2000; Hamacheck, 1978). The authors presented research indicating that excessive need for approval from others might predispose people to develop anxiety and depression (Ellis, 2002; Wei, Mallinckrodt, Larson, & Zakalik, 2005). Conversely, studies have shown that one's capability to self-reinforce is negatively correlated with anxiety and depression, and evidenced that therapy can reduce clients' anxiety and depression by assisting them to engage more in self-reinforcement (Beck, 1967, Kocovski & Endler, 2000; Rehm & Marston, 1968; Rehm, 1977).

In understanding meditational roles of validation from others and self between two dimensions of perfectionism and negative mood, Wu and Wei (2008) recruited 295 college students who were predominantly Caucasian (90%), followed by Asian American (3%), Hispanic American (2%), International Students (2%), African American (2%), and multiracial Americans (1%). The participants were asked to complete a set of instruments. The Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashbly, 2001) and the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990) were used to assess EC perfectionism and PC perfectionism. To measure the need for reassurance from others, the Brief Fear of Negative Evaluation (Learly, 1983), and the Revised Martin-Larsen Approval Motivational scale were employed. Lastly, the Frequency of Self-Reinforcement Questionnaire (FSPQ; Heiby, 1983) was utilized to assess the capacity for self-reinforcement. The Anxiety subscale

and the Depression subscale from the Depression, Anxiety, and Stress Scale were used to measure anxiety and depression, respectively (Lovibond & Lovibond, 1995).

The researchers conducted a confirmatory factor analysis and the result revealed that the latent variables were appropriately measured by the 14 observed variables. The analyses based on structural equation modeling showed that the relationship between EC perfectionism and anxiety and depression was fully mediated by the need for reassurance from others and the capacity for self-reinforcement. These findings imply that a high need for reassurance from others and a low capacity for self-reinforcement might play a role in the development of depression and anxiety among people with EC perfectionism. On the other hand, the relationship between PS perfectionism and anxiety and depression was partially mediated by the need for reassurance from others and the capacity for self-reinforcement. Such results indicate that PS perfectionistic people tend to have a relatively low need for reassurance from others, while they demonstrate a relatively high capability for self-reinforcement.

Apart from these findings, it is important to note several limitations of this study. First, the majority of participants (90%) were Caucasian, so one should be cautious in generalizing the results to other ethnic populations. Next, although this study employed structural equation modeling, which is a powerful method for testing mediators, this cross sectional study might not be sufficient for explaining the mediation models compared to a longitudinal design. Lastly, the authors acknowledged that there might have been an order effect because the orders of the measures were not counterbalanced.

Some theorists have argued that a contingent sense of self-worth and low unconditional self-acceptance might play a crucial role in the development of

perfectionism (Flett, Hewitt, Oliver, & Macdonald, 2002; Ellis, 2002). Flett, Davis, and Hewitt (2003) demonstrated that the indirect association between socially prescribed perfectionism and depression might be accounted for by low self-liking and low self-competence. In order to support such a claim, these researchers investigated the relationships among perfectionism, unconditional self-acceptance, and psychological distress, and also tested a mediator of unconditional self-acceptance in the relationship between perfectionism and distress. The participants in this study were college students including 76 females, 16 men, and 2 unspecified. The researchers asked the subjects to fill out the Multidimensional Perfectionism Scale (MPS, Hewitt & Flett, 1991), the Unconditional Self-Acceptance Questionnaire (Chamberlain & Haaga, 2001), and the Center for Epidemiological Studies Depression Scale (CES-D, Radloff, 1977).

The zero-order correlations showed that all three dimensions of perfectionism were significantly correlated with low levels of unconditional self-acceptance, especially socially prescribed perfectionism that had the strongest relation. According to the structural equation modeling analyses, conditional self-acceptance almost fully mediated the relationship between socially prescribed perfectionism and depression. This results evidenced that conditional self-acceptance is a crucial psychological mechanism which might contribute to a vulnerability to depression for those with socially prescribed perfectionistic tendencies (Flett, Davis, & Hewitt, 2003).

As was the case with Wu and Wei's study (2008), the cross sectional design of this study might not fully explain the mediator of unconditional self-acceptance relative to a prospective design which can evaluate the relationships among perfectionism, unconditional self-acceptance, and depression over time. Another limitation of this study

is a concern for external validity because the authors did not specify the ethnic composition of this sample, and they had a predominantly female sample. In this regard, one should be cautious in generalizing the findings to other populations. Moreover, the relatively small sample size ($N=94$) might cause a lack of statistical power.

Self-Conscious Emotions and Perfectionism

An association between shame and maladaptive perfectionism has been theorized in the conceptual literature (Blatt, 1995). Sorotzlin (1998) maintained, “the inevitable failure to live up to perfectionist standards results in profound shame ... [which] attacks the very fabric of the self” (p. 568). Tangney (2002) conducted a critical literature review investigating perfectionism and the self-conscious emotions: shame, guilt, embarrassment, and pride, claiming that perfectionists are prone to experience such self-conscious emotions because they are susceptible to the process of evaluation. The author differentiated shame and guilt in that “feelings of shame involve a painful negative scrutiny of the entire self, while feelings of guilt involve a negative evaluation of specific behavior” (Tangney, 2002, p. 201). Subsequently, experiencing shame might contribute to feelings of worthlessness and powerlessness as well as being exposed. In this light, perfectionists have a relatively high vulnerability for feelings of shame due to their erroneous cognitive styles: all or nothing thinking, either perfect or wrong, and overgeneralization for failure. In particular, socially prescribed perfectionists seem to be predisposed to experience more shame, given that they are more concerned with other’s evaluation (Tangney, 2002).

Ashby, Rice, and Martin (2006) investigated how shame and self-esteem might play a mediator role in the relationship between maladaptive perfectionism and

depressive symptoms. Data were collected from 215 college students most of whom were Caucasian (94%). There were 170 women and 45 men with an average age of 22.9 years. Participants completed a set of measures, APS-R (Slaney et al, 2001) and FMPS (Frost et al, 1990), Internalized Shame Scale (ISS; Cook, 1988), RSI (Rosenberg, 1965), and BDI (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) in order to assess maladaptive perfectionism, shame, self-esteem, and depressive symptoms, respectively.

The researchers (Ashby, Rice, & Martin, 2006) employed the regression analysis strategy demonstrated by Baron and Kenny (1986) and Holmbeck (1997). First, the relationship between the predictor (maladaptive perfectionism) and the mediator (self-esteem) must be significant. Another assumption is that the predictor and the mediator, respectively must have a significant association with the outcome (depression). Lastly, with the mediator controlled, the strength of the relationship between the predictor and the outcome should decrease. Data analysis revealed that self-esteem partially mediated the relationship between maladaptive perfectionism and depression for both women and men, while shame partially mediated the path to depression for maladaptive perfectionism for only women. When including the variables of self-esteem and shame, the researchers created a path model of maladaptive perfectionism and depression for both women and men. The path model for women suggested that perfectionism has an indirect association with self-esteem through shame, besides its direct association. This, in turn, affects depression apart from the direct effect of perfectionism on depression. On the other hand, neither adverse effect of perfectionism on self-esteem nor the indirect effect of perfectionism on self-esteem through shame was found for men (Ashby, Rice, & Martin, 2006).

Although such findings support and extend the previous research regarding maladaptive perfectionism and depression (e.g., Preusser, Rice, & Ashby, 1994; Rice, Ashby, & Slaney, 1998), this study (Ashby, Rice, & Martin, 2006) has some limitations. Considering that this study was designed to explain gender-specific differences, the predominant sample of women ($n=170$) compared to men ($n=45$) might have erroneously led to the gender differences in this study. A small sample size of men might still cause lack of statistical power, even though the authors attempted to justify the small size by anticipating a large effect size of maladaptive perfectionism and depression. As the authors acknowledged, another limitation is that although path modeling can enable causal inference, the correlational design of this study should be taken into account.

Interpersonal Aspects of Perfectionism

Attachment and Perfectionism

Several theorists have conceptualized that the quality of the parent-child interaction might account for the development of perfectionism, describing parents as critical and harsh by imposing unrealistic high standards on children (Hamacheck, 1978; Sorotzkin, 1998). Hamacheck (1978) further stated that children might develop maladaptive perfectionism in an attempt to satisfy parents with high standards for achievement, being driven by their need for acceptance or approval from the parents. Indeed, Blatt (1995) argued that “highly perfectionist, self-critical individuals... struggle to meet harsh judgmental parental standards and are identified with these attitudes of their parents, attitudes that they now direct toward themselves so that whatever they accomplish is never fully sufficient” (p.1012). On the other hand, Rice and Mirzadeh

(2000) suggested that if parents can demonstrate their capability to adjust goals flexibly and enjoy the process of achieving goals, children can develop adaptive perfectionism rather than maladaptive perfectionism.

In order to explicate such parental influence on perfectionism, many researchers have linked perfectionism with attachment style. Based on attachment theory (Bowlby, 1988), one's early experience with parents or caregivers is critical in forming their general approach to interacting with significant others. Secure attachments emerge from experiencing parents' nurturance and emotional warmth, which enable children to sense comfort and predictability, thereby approaching intimate relationships without avoidance. Conversely, insecure attachment styles, such as anxious or avoidant, stem from parental emotional unavailability, criticism, and harshness (Bowlby, 1969, 1973, 1988). Taken together, several researchers claimed that insecure attachment styles might be related to the origins of perfectionism, given the literature supporting the critical role of parent-child relationship in the development of perfectionism (Andersson & Perris, 2000; Flett, Hewitt, Oliver & Macdonald, 2002; Rice & Mizadeh, 2000).

In an attempt to support such a claim, Rice and Mizadeh (2000) conducted empirical research to investigate the relationship between perfectionism dimensions and attachment styles. They expected that adaptive perfectionists are likely to have secure attachment styles, whereas maladaptive perfectionists tend to show insecure attachments. Another hypothesis was that adaptive perfectionists would manifest higher academic attainment and less depressive symptoms than maladaptive counterparts. In their first study, 49 male and 129 female undergraduates were recruited at a large Midwestern university. The predominant race of participants was White, European

American (94%). Participants completed the packet of questionnaires including Frost et al.'s (1990) Multidimensional Perfectionism Scale (FMPS) and the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) to assess perfectionism and attachment style, respectively (Rice & Mizadeh, 2000).

According to cluster analysis which is useful in identifying “homogenous subtypes within a complex data set.... to identify groups within a data set” (Borgen & Barnett, 1987, p. 460), three clusters emerged: adaptive perfectionists, normal, and maladaptive perfectionists. Adaptive perfectionists were more likely to endorse items regarding high personal standards and preference for organization, while maladaptive perfectionists manifested excessive concerns about making mistakes and self-doubt, and reported having parents who were exceedingly critical with high expectations of them. Furthermore, logistic regression, confirming the hypothesis, revealed that secure attachment was a stronger predictor for adaptive perfectionism than maladaptive perfectionism (Rice & Mizadeh, 2000).

The authors (Rice & Mizadeh, 2000) conducted a second study to replicate and extend the findings from their first study. Besides the measures used in Study 1, they added the Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977) to measure depressive symptoms, as well as Academic Integration (Cabrera, Nora, & Castaneda, 1993) to assess academic integration and adjustment. The results from Study 2 corroborated the findings from Study 1, demonstrating that students with secure attachments were more likely to be adaptive perfectionists. Furthermore, mean differences showed that maladaptive perfectionists were likely to be less academically integrated and more depressed than adaptive counterparts (Rice & Mizadeh, 2000).

Despite the importance of these first empirical data on perfectionism and attachment style, Rice and Mizadeh's (2000)'s findings are limited by the correlational design, indicating that inferences about causal relationships between perfectionism and attachment style cannot be made. Another limitation is that although the authors replicated their first study with a different sample for cross-validation, one must still be cautious to generalize such findings to other population given the predominance of European Americans (94%) in the sample. Also, the authors noted that the quality of attachment was not a significant predictor of maladaptive perfectionism, as opposed to adaptive perfectionism. These findings suggest that apart from attachment style, factors such as perceptual distortions and other defenses might also play a role in the development of maladaptive perfectionism (Rice & Mizadeh, 2000).

In a subsequent study, Rice and Lopez (2004) examined how adult attachment styles are linked with perfectionism, self-esteem, and depression in college students. Based on their literature review on attachment style and emotional regulation, they concluded that individuals with an anxious attachment style tend to be afraid of being rejected and abandoned in intimate relationships. Those with avoidant attachment style, on the other hand, are prone to experience discomfort with intimacy and suppress negative emotions. Thus, the authors speculated that adult attachment orientation might be related to important difference in self-esteem and depression among maladaptive perfectionists. They hypothesized that the more solid self-structure of maladaptive perfectionists, with a secure adult attachment style, may serve to buffer the person from threats to self-esteem contingent on performance. By contrary, maladaptive perfectionists with anxious and avoidant attachment styles were expected to be more

vulnerable to negative consequences from their perfectionist tendencies, which may be attributable to their less cohesive and stable self-structure. Collectively, the authors sought to investigate whether attachment security was a moderator between the negative effects of maladaptive perfectionism on self-esteem and depression.

Fifty one male and 152 female college students took part in the study, with 84% self-identifying as White. The participants completed a set of instruments, including the Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990), Adult Attachment Questionnaire (Simpson et al., 1992), Rosenberg Self-Esteem Inventory (SEI; Rosenberg, 1965, 1979), and Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977). Among subscales in the FMPS, the Concern Over Mistake and Doubt About Actions were used to identify maladaptive perfectionism with Personal Standard scores controlled as either adaptive or maladaptive. Moderator analyses using predictors and interactions in regression equations revealed that 40% of the variance in SEI scores was accounted for by maladaptive perfectionism and adult attachment security, along with the interactions between the two predictors. Consistent with the hypothesis, higher insecure attachment scores with greater maladaptive perfectionism predicted lower SEI scores. The follow-up analysis for the interaction showed that with the increase in adult insecure attachment, the levels of SEI scores among maladaptive perfectionists decreased (Rice & Lopez, 2004).

Rice and Lopez's study (2004) has several limitations. First of all, the authors failed to report the results regarding how adult attachment security moderated the relationship between maladaptive perfectionism and depression, even though they claimed that in their introduction, they would test it. The authors could have

demonstrated how depression among maladaptive perfectionists would be related to adult attachment styles. Moreover, the authors maintained that there was a difference in interaction with significant others between anxious and avoidant attachment orientations. Thus, instead of using a composite score, the authors could have used Anxiety and Avoidant scale, respectively, to investigate how two such distinct orientations in insecure attachment style would differ in moderating the relationship between maladaptive perfectionism and self-esteem. Similar to other research, this study also utilized a survey research design, relying on self-report measures, which raises concerns about internal validity, apart from a threat to external validity due to the predominance of White female participants in the sample.

As a line of research similar to Rice and Lopez's study (2004), Wei, Mallinkrodt, Russell, and Abraham (2004) conducted a study to examine whether maladaptive perfectionism would mediate or moderate the relationship between adult attachment and depressive mood. The authors conceptualized that those with high anxiety or avoidance attachment are likely to be predisposed to develop maladaptive perfectionism which in turn causes depression. According to their literature review, perfectionism mediated the relationships between harsh and critical parenting and depression (Enns, Cox, & Clara, 2002; Randolph & Dykman, 1998). Additionally, perfectionism could moderate the relationship between insecure attachment and depressive mood (Hewitt & Flett, 2002). Taken together, Wei and colleagues (2004) hypothesized that there would be a causal relationship between attachment insecurity and depression through maladaptive perfectionism as a mediator. Also, maladaptive perfectionism was hypothesized to

change the strength of the relationship between attachment and depression (i.e., moderator).

The study consisted of 310 undergraduates of whom 73% were women, and predominantly Caucasian (84%). Participants were asked to complete a packet of measurements. One of the instruments in the study to assess adult attachment was Experiences in Close Relationship Scale (ECRS; Brennan et al., 1998) which has two subscales: Anxiety and Avoidance. To measure different dimensions of maladaptive perfectionism, the Discrepancy subscale from the Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001), and Concern Over Mistakes, and Doubt about Action subscales from the Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990) were administered to participants. Additionally, the Beck Depression Inventory (BDI; Beck et al., 1961) and Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) served as indicators of the latent variable, depressive mood.

According to the analyses based on structural equation modeling, maladaptive perfectionism is a partial mediator between attachment anxiety and depressive mood, and a full mediator between attachment avoidance and depressive mood. In particular, attachment anxiety displayed the stronger relationship with perfectionism, which in turn was positively related to depressive mood. Such findings are consistent with the previous studies that maintained that the association between the parenting quality in early childhood and vulnerability to depression is mediated by maladaptive perfectionism (Enns et al., 2002; Randolph & Dykman, 1998). The results revealed there was no statistically significant relationship between attachment avoidance and depressive mood after controlling for maladaptive perfectionism. Interestingly, when the

indirect effect of maladaptive perfectionism was eliminated, the relationship between attachment anxiety and depressive mood still remained statistically significant but the magnitude of the relationship notably decreased. Apart from the mediating effects of maladaptive perfectionism, its moderating effects (e.g., interaction) were also examined by using structural equation modeling. The results showed that the interaction of attachment anxiety and maladaptive perfectionism was statistically significant, but not for attachment avoidance. Namely, the results highlight that individuals with high levels of attachment anxiety and maladaptive perfectionism are more likely to be vulnerable to depressive mood.

As found in previous studies in this literature review, the design of this study (Wei et al., 2004) was correlational and based on self-report. Consequently, despite the use of a sophisticated data analysis, statistical equation modeling, it is still questionable whether a causal link can be made. Furthermore, as the authors acknowledged, the findings from this study cannot be generalized to other populations, considering the sample consisted predominantly of Caucasian female undergraduates.

Perfectionism and Psychological Distress

Socially prescribed perfectionism has been theorized and empirically tested with respect to its strong association with psychological distress including depression, anxiety, and suicidal ideation (Chang, 1998; Hewitt, Norton, Flett, Callander, & Cowan, 1998). Empirical findings support the idea that socially prescribed perfectionism is related to a wide range of relational dysfunctions such as loneliness, marital conflict, neediness, social hopelessness, as well as hostility (Flett, Hewitt, Garshowitz, & Martin, 1997; Hewitt, Flett, Sherry, & Caelian, 2006). It has been conceptualized that people

with high levels of socially prescribed perfectionism are vulnerable to subjective social disconnection, due to their distorted perception of others resulting from their irrational beliefs and interpersonal sensitivities. Namely, individuals with high levels of socially prescribed perfectionism seem to experience agony, believing that they cannot live up to others' unrealistic expectations. This is compounded with their excessive need for approval and sensitivity to criticism, which is commonly found among people high on socially, prescribed perfectionism (Hewitt & Flett, 1991).

Building on such evidences, Sherry, Law, Hewitt, Flett, and Besser (2008) conducted a study to investigate whether the relationship between socially prescribed perfectionism and depressive symptoms would be mediated by received social support (i.e., how often one has received a variety of socially supportive behaviors) and subjective social disconnection (i.e., perceived social support). The researchers recruited 222 undergraduates (169 women) at a university located in Vancouver. Most of participants were Asian (62%) followed by European (28%). The participants completed a set of instruments including the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991), Inventory of Socially Supportive Behavior (ISSB; Barrera, Sandler, & Ramsay, 1981), Social Provisions Scale (SPS; Cutrona, 1989), as well as the Beck Depression Inventory (BDI, Beck, Steer, & Garbin, 1988) to assess perfectionism, received social support, perceived social support, and depressive symptoms, respectively. Specifically, the Social Provisional Scale (SPS) has three subscales: attachment, reliable alliance, and guidance.

Bivariate correlations showed that socially prescribed perfectionism was significantly negatively correlated with all three subscales of the SPS: attachment,

reliable alliance, and guidance. In contrast, socially prescribed perfectionism was not significantly correlated with received social support. Subsequently, the structural equation modeling analysis was conducted only for the mediating effect of perceived social support on the relationship between socially prescribed perfectionism and depressive symptoms. The results revealed that perceived social support served as a mediator, accounting for 28.1% of the total variance of socially prescribed perfectionism on depressive symptoms. These findings indicate that individuals with high levels of socially prescribed perfectionism are prone to a sense of disconnection from their social support system, which in turn leaves them more vulnerable to depression.

Interestingly, the majority of the sample in Sherry et al.'s (2008) study was Asian (62%), although the authors did not intend to focus on an Asian population. In this light, these results might reflect distinct and unique aspects of Asian culture related to perfectionism. For example, Chang (1998) found that Asian American reported higher levels of socially prescribed perfectionism than European Americans, which might be attributable to their collectivistic culture. Accordingly, Sherry and his colleagues should have taken into account cultural factors in interpreting the results and limited their generalizability of findings to other populations. Similar to other studies that used structural equation modeling to test a mediator, the cross-sectional design of this study limits making a causal inference.

Along with studies focusing on the effects of socially prescribed perfectionism on depression, many researchers have demonstrated the association between socially prescribed perfectionism and social anxiety (Heimberg & Becker, 2002; Schlenker & Leary, 1982). Alden, Bieling, and Wallace (1994) claimed that women high on socially

prescribed perfectionism reported higher social anxiety. Bieling and Alden (1997) found that social anxiety was associated with lower social self-efficacy, while socially prescribed perfectionism was not related to social self-efficacy but was significantly correlated with higher expectations of others.

Building on the previous findings, Laurenti, Bruch, and Haase (2008) investigated the role of social anxiety and socially prescribed perfectionism in the context of maladaptive appraisal of social situations. The researchers recruited 77 community college students (47 women) to take part in a laboratory assessment. First, the participants completed the Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998) and the Socially Prescribed Perfectionism subscale from the Multidimensional Perfectionism Scale (MPS; Hewitt and Flett, 1991) to assess social anxiety and socially prescribed perfectionism respectively. Then, the participants were informed that they would carry on a conversation with a member of the other gender, and this interaction was intended to elicit social anxiety. In order to assess self-efficacy discrepancy, the participants were asked to rate self-perceptions and perceptions of others for the anticipated interactions by using a 10-point Visual Rating Scale (VRS; Wallace & Alden, 1991). For the VRS, there were three videos of heterosocial interactions that represented anchor points of 2, 5, and 8 on a 10-point scale. As the point increased, the individuals in the tape demonstrated higher social skills with more comfort, such as appropriate eye contact, more verbalization, and interested facial expression. Subsequently, the participants completed the Social Self-efficacy Rating developed by Wallace and Alden (1991), as well as the short version of the Social Interaction Self-Statement Test (SISST; Glass, Merluzzi, Biever, & Larsen, 1982) to

assess negative and positive self-statements. Last, the participants were debriefed about the purpose of this study, informing them that the interaction would not occur.

According to hierarchical regression analyses, both social anxiety and socially prescribed perfectionism were statistically significant predictors of the other standards-self-efficacy discrepancy ($p < .01$). Furthermore, there was the statistically significant interaction between social anxiety and socially prescribed perfectionism ($p < .01$). This indicated that participants high on social anxiety and socially prescribed perfectionism reported the greater discrepancy, believing they would not meet others' high expectations. Individuals with low social anxiety across all levels of socially prescribed perfectionism, however, demonstrated little discrepancy, indicating that they would either match or do slightly better than others' expectations. On the other hand, the analyses revealed that socially prescribed perfectionism was not significantly related to negative self-statements, as opposed to social anxiety that was a robust predictor of negative self-statement ($p < .001$). Interestingly, there was a statistically significant interaction between social anxiety and socially prescribed perfectionism in predicting negative-self statements ($p < .01$). Such findings suggest that high levels of socially prescribed perfectionism may actively trigger self-deprecating thoughts and emotions in socially anxious individuals when they anticipated interaction with a member of the opposite gender.

Compared with other studies, the design of this study was more rigorous in its use of laboratory assessment that was effective in eliciting anticipatory anxiety from the participants. Also, the use of the Visual Rating Scale (VRS) provided participants with objective anchors for rating social skills, which led to reducing the limitations of self

reports based on a Likert scale that entirely rely on respondents' subjective perceptions. Apart from such strengths, however, the findings of this study must be considered in the context of potential limitations. Most of all, the researchers did not specify whose expectations the participants would rate, so the participants might have been confused between an experimenter and an interaction partner. Depending on a target, there likely would have been the differences in the participants' perceptions of others' expectation. Another limitation is that given the comorbidity of depression and social anxiety, depression that was not assessed in this study might have contributed to the results.

Cultural Aspects of Perfectionism

Ethnic Minorities and Perfectionism

Despite burgeoning research on multiple aspects of perfectionism, there is a paucity of studies that investigated racial/ethnic differences in perfectionism. A literature review concerning stereotypes of Asian American students (Yee, 1992) underscores that many Asian Americans endorsed excessive perfectionistic behaviors. The findings from Peng and Wright's (1994) study suggest that Asian Americans are concerned about not living up to their parental high expectations, corresponding to one of the subscales of Multidimensional Perfectionistic Scale (MPS; Frost et al., 1990). According to Chang's empirical study (1998) using Frost et al.'s (1990) MPS, Asian American college students scored higher on doubts about their actions, parental expectations, and concerns about making mistakes. They also perceived more parental criticism compared with Caucasian American counterparts. Furthermore, Chang (1998) found that Asian Americans more likely endorsed items related to hopelessness and suicidal ideation. Similarly, according to Nilsson et al.'s study (1999), African Americans students also scored higher on the

parental expectation scale of the FMPS than Caucasian students. Interestingly, African Americans reported lower scores on the concern over mistakes and parental criticism subscale than Caucasians.

In order to extend the existing literature with respect to perfectionism and ethnicity, Castro and Rice (2003) conducted a study with two samples, Asian Americans and African Americans, respectively. One hundred eighty six undergraduates (146 women) completed the Multidimensional Perfectionism Scale (MPS; Frost et al., 1990), and the Center for Epidemiologic Studies Depression Scale (CES-D scale; Radloff, 1977). They were also asked to report their cumulative college GPA. The sample comprised three ethnic groups: 59 Asian Americans, 65 African Americans, and 65 Caucasian Americans. The numbers for other ethnic groups were too small to analyze.

A multivariate analysis of variance with the three ethnic groups as the independent variables, and the six MPS subscales as dependent variables, yielded a statistically significant multivariate effect ($p < 0.001$). Subsequent univariate analyses revealed significant differences among the three ethnic groups on all MPS subscales except the organization scale. Post hoc comparison tests (Tukey) showed that compared with the other two groups, Asian American students had significantly higher scores on the following subscales: the concern over mistakes, parental criticism, and doubts about action. Moreover, Asian American students scored higher on the personal standard than Caucasian American students. Both Asian American and African American students reported higher on the parental expectation scale than Caucasian counterparts. Separate univariate ANOVAs for the CES-D and GPA were performed. The results revealed no significant differences in the CES-D scores among the three ethnic groups. On the other

hand, based on the significant differences in GPA among the three ethnic groups, post hoc comparison tests (Tukey) were performed, indicating that Asian American and Caucasian students reported significantly higher GPAs than African American students.

Castro and Rice's study (2003) has several limitations. First, although the study was designed to distinguish ethnic groups in terms of presenting perfectionistic traits, it is important to consider within-group variables, especially generational status or acculturation, which may account for within-group differences. Above all, the relatively small sample size of each ethnic group may result in a lack of statistical power. Along with previous studies, the correlational design of this research cannot allow a causal inference.

International Students and Perfectionism

Along with several studies investigating the differences in perfectionism among race/ethnic groups, there is a small body of research on the effects of perfectionism on international students. According to a survey by the Institute of International Education (2011), there were 723,277 international students in the United States, and 50% of them came from countries in Asia, including India, China, Korea, Taiwan, and so forth. Given the unique characteristics of international students as sojourners, acculturation has been conceptualized as one of the robust predictors in the adjustment of international students. Acculturation is defined as the process of adjusting to a new culture accompanying internal and behavioral changes (Berry, Kim, Minde, & Mok, 1987; Redfield, Linton, & Herskovits, 1936; Sodowsky & Plake, 1991). In general, Asian international students from collectivistic cultures emphasizing obligation to family and community tend to have high standards of performance with high parental expectations (Mordkowitz &

Ginsburg, 1987; Yee, 1992). This might cause Asian international students to suffer from maladaptive perfectionistic characteristics.

Nilsson, Butler, Shouse and Joshi (2008) investigated the relationships among perfectionism, acculturation, and stress. They postulated that perfectionism and acculturation would be predictors for stress. Seventy six international students from Asian countries were recruited, consisting of 29 Indians, 19 Chinese, 7 Taiwanese, 5 Malaysians, and 16 students from other Asian countries. All participants completed a set of measurements. The American- International Relational Scale (AIRS, Sadowksy & Palke, 1991) was included to assess the levels of acculturation to the majority culture in the United States. The AIRS has three subscales: Perceived Prejudice, Acculturation/Social Customs, and Language Use. Other instruments used in this study were the College Stress Inventory (CSI; Solberg, Hale, Villarreal, & Kavanagh, 1993), and F-MPS (Frost et al, 1990) to assess stress and perfectionism, respectively.

A multiple hierarchical regression analysis was performed to investigate whether perfectionism and acculturation variables (social customs and perceived prejudice) would be related to stress. Language proficiency was not included due to a lack of significant correlation with stress. As the first step, perfectionism was entered, followed by acculturation variables, social customs, and perceived prejudice. According to the results, perfectionism accounted for 12% of the stress variance, and both perfectionism and acculturation variables accounted for 50 % of the stress variance. Among the acculturation variables, only the perceived prejudice significantly predicted stress.

There are several limitations in Nilsson et al.'s (2003) study. First of all, the small sample size ($N=76$) would yield a lack of statistical power. In addition, the study

used a convenience sample, so Indian students were predominant in the sample. This might have underplayed the effect of language use as an acculturation variable, given their English fluency. Collapsing Asian international students from different countries might have also affected the results, without consideration of the distinctive features of each ethnic group in Asian countries.

According to several studies, a majority of international students seek help from university counseling services due to depression (Nilsson, Berkel, Flores, & Lucas, 2004; Yi, Lin, & Yuko, 2003). Given the importance of acculturation in the adjustment of international students, acculturative stress is viewed as one of the common stressors contributing to depression in international students. Generally, acculturative stress is defined as “a stress reaction in response to life events that are rooted in the experiences of acculturation” (Wei, Heppner, Mallen, Ku, Liao, & Wu, 2007, p. 386).

Wei and his colleagues (2007) investigated whether the relationship between acculturative stress and depression would be moderated by maladaptive perfectionism and length of time in the United States among Chinese international students. The researchers conducted an online survey to which 189 Chinese students from China and Taiwan responded. Most of the participants were graduate students (81%), and 49% of the sample were males. The participants completed a packet of instruments that were translated into Chinese. The Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi, 1994) was included to measure acculturative stress. Maladaptive perfectionism was assessed with the Discrepancy subscale of the Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001). The Discrepancy subscale is conceptualized as measuring distress from the discrepancy between one’s expectations

and actual performance and standards and has been viewed as maladaptive perfectionism. In addition, the Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977) was used to assess depression. Lastly, the participants were asked to report the length of time in the United States.

Results of a hierarchical regression revealed that 49 % of the variance in depression was accounted for by maladaptive perfectionism and length of time in the U.S. ($p < .001$). Acculturative stress and maladaptive perfectionism were also robust predictors for depression ($p < .001$). Furthermore, there was a statistically significant three-way interaction among maladaptive perfectionism, acculturative stress, and the length of time in the U.S. ($p < .05$). According to the subsequent analyses for simple interactions, there was a significant simple interaction between acculturative stress and maladaptive perfectionism among the participants who had been in the U.S. for a longer period of time ($p = .03$). Such results indicate that as the participants stayed longer in the U.S., high maladaptive perfectionists, as a function of high acculturative stress, reported more depressive symptoms than low maladaptive perfectionists. Also, according to the post hoc analyses, the results further indicated that individuals reporting high maladaptive perfectionism were more vulnerable to depression irrespective of their length of stay in the U.S.

Several limitations of Wei et al.'s (2007) study are noteworthy. First, as the authors acknowledged, the response rate was low (39%), so only those who were interested in the topic might have participated. This, in turn, might have biased the results. Similar to other research, this study, as a correlational design, entirely relied on self-report. Thus, a causal inference cannot be made. Despite the predominance of

Chinese students in a population of international students in the U.S., one should be cautious in generalizing the findings to other Asian populations given their unique and distinct cultures. Also, the majority of the sample were graduate students. Given the recent drastic increase in the number of international undergraduates who might manifest differences in terms of maturity, it would be worthwhile to replicate Wei et al.'s study (2007) with an undergraduate population.

Self-Compassion

Neff (2003a) created a new construct, self-compassion, based on Buddhism. Self-compassion encompasses three primary aspects: “(a) *self-kindness*- being kind and understanding toward oneself in instances of pain or failure rather than being harshly self-critical, (b) *common humanity*-perceiving one’s experiences as part of the larger human experience rather than seeing them as separating and isolating, and (c) *mindfulness*-holding painful thoughts and feelings in balanced awareness rather than over-identifying with them” (Neff, 2003a; p.85). A further elaboration of these three aspects of self-compassion follows:

Self-kindness versus self-judgment. Self-kindness is an extension of kindness, forgiveness, warmth, gentleness, and sensitivity, and patience regarding one’s thoughts, feelings, actions and impulses (Gilbert & Irons, 2005; Neff, 2003a). Among individuals who are self-kind, their self-worth is unconditional, and it stays intact in the face of failure, with the firm belief that they deserve love, happiness, and affection. Conversely, people who are self-judgmental tend to be hostile, demeaning, and critical of one’s self, as well as to reject their own feelings, thoughts, actions, worth, and impulses (Brown, 1998; Neff, 2003a). Relentless self-judgment can exacerbate the pain elicited by a given

situation, but it is not easy to be aware of self-judgment, because it feels so natural to people. It is difficult to realize how self-judgment can contribute to one's suffering and pain, so the first step to increase self-kindness is to recognize its detrimental effect on one's psychological well-being (Gilbert & Irons, 2005).

Common humanity versus isolation. Buddhism disputes an illusion to view oneself as separated from others, with the emphasis on social connection. Common humanity involves the awareness of our connection to others, particularly when we suffer from imperfection, failure, sorrows, and vulnerability. It is also important to forgive oneself for being humane, limited, and imperfect. Nevertheless, people are likely to withdraw from others when they suffer from feelings of pain, shame, frustration, or inadequacy (Brown, 1998; Neff, 2003a).

Mindfulness versus over-identification or avoidance. Mindfulness entails being aware, attentive to, and accepting the present moment. (Shapiro, Astin, Bishop, & Cordova, 2005; Shapiro, Brown, & Biegel, 2007). Mindfulness emphasizes both aspects of cognition and emotions related to one's present experiences, and it focuses on observing and naming one's thoughts and emotions without reacting to them (Kabat-Zinn, 2003). According to the theory, mindfulness enhances one's capacity to profoundly experience and learn from the present rather than to be distracted by self-judgments or ruminations about the past or worries for the future (Neff, 2003a). In addition, mindfulness can be deemed as a middle ground between the two extremes, over identification and avoidance. Over-identification means ruminating about one's own weakness, and fixating on one's failures in a tunnel vision that inhibits staying present (Gilbert & Procter, 2006; Neff & Vonk, 2009). On the other hand, avoidance of

negative emotions, thoughts, and feelings can eventually contribute to long-lasting psychological distress and emotional pain (Germer, 2009). Therefore, both over-identification and avoidance can interfere with one being mindful; being mindful will facilitate one's exploration and learning from emotions, thoughts, and experiences (Neff, 2003a).

Neff (2003a) asserted that the three distinct aspects of self-compassion interact and enhance each other. Mindfulness directly affects the other two aspects by reducing self-judgment and developing self-awareness, which in turn increases self-kindness (Neff, 2003b). Mindfulness also provides balanced perspective taking, and this offsets the egocentrism that creates isolation and separation from humanity (Elkind, 1969). This in turn engenders feeling of interconnectedness (Elkind, 1969; Jopling, 2000). Inversely, self-kindness and common humanity can enhance mindfulness. Increased self-kindness can lead to self-acceptance with decreased negative emotions, which enables balanced awareness of ones' thoughts and feelings. Furthermore, the increased understanding of common humanity - all people experience suffering and pain -can strengthen mindfulness, so people can be more mindful of their thoughts and emotions without over-identifying with them. In addition, self-kindness and common humanity interact with each other. For instance, when people are harshly self-critical, the accompanying sense of shame can bring them a sense of isolation (Brown, 1999). Self-kindness, however, can reduce a sense of shame, thereby engendering a greater sense of interconnection (Fromm, 1963). On the other hand, the concept of common humanity can contextualize one's experience to be part of the larger human conditions. This contextualization can buffer an individual from self-blame and judgment, in turn

fostering a sense of self-kindness by depersonalizing one's painful experience (Rubin, 1975).

The Self-Compassion Scale (SCS), developed by Neff (2003b), consists of six subscales including self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. Originally, the SCS was intended to assess three primary aspects (self-kindness vs. self-judgment, common humanity vs. isolation, and mindfulness vs. over-identification). However, a factor analysis yielded six factors. In self-report measures, it is possible that positive and negative items are not loaded on the same factor. Neff (2003b) explained that these positive and negative aspects of the SCS are not mutually exclusive. For instance, a person who is prone to self-judgment can strive to be kind to oneself. Similarly, someone who tends to feel isolated does not necessarily fail to see one's experience as part of common human experiences. In a similar vein, those who are likely not to over-identify with negative emotions and thoughts may not be aware of their thoughts and feelings in a mindful way. The SCS has been used in a number of empirical studies to examine the relationships between self-compassion and other constructs.

Neff (2003b) conducted a study to validate the SCS by investigating the relationships between self-compassion and psychological distress. The SCS had a strong inverse relationship with the Beck Depression Inventory (BDI; Beck et al., 1961), $r = -.51$, $p < .01$. Similarly, there was a significant negative correlation with the Spielberger Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970), $r = -.65$, $p < .01$. Thus, these results indicated that self-compassion might serve to foster psychological resilience and mental health. Furthermore, the SCS was also significantly inversely

related to the Discrepancy Scale in the Almost Perfect Scale—Revised (Slaney et al., 1996), $r = -.57$ $p < .01$. These findings might support that individuals with self-compassion are prone to be accepting of themselves, and less distressed, even in times of failing to fulfill their personal standards. Further information on the SCS is provided in Chapter 3.

It is also important to consider the uniqueness and relevance of self-compassion with regard to other self-constructs. Self-compassion cannot be interchangeably used with self-esteem. Self-esteem involves evaluating self-worth, which is promoted by attainments and thwarted by failures (Kernis, 2003). Thus, some aspects of self-esteem can be viewed as contingent on one's evaluation of competency in critical life domains, and this can be named as contingent self-esteem (Baumeister, Smart, & Boden, 1996; Kernis, 2003; Leary, Tate, Adams, Batts Allen, & Hancock, 2007). Self-compassion differs from contingent self-esteem because self-compassion is related to unconditional acceptance, while contingent self-evaluation is based on one's self-evaluation. Empirical findings support that self-compassion is distinct from contingent self-esteem, noting that these two constructs are different and even inversely correlated, $r = -.47$ (Neff & Vonk, 2009).

In addition to self-esteem, self-pity should be differentiated from self-compassion (Goldstein & Kornfield, 1987). When individuals experience self-pity, they tend to isolate themselves from other, being immersed in their own problems and forgetting that others also struggle with similar pains. In contrast, self-compassion can lead individuals to relate to others by realizing that they are not alone in struggling with inadequacies and failures. Moreover, people experiencing self-pity are likely to over-

identify with their negative emotions and thoughts, while self-compassion requires mindful distance through which individuals can be self-kind and recognize their struggles as part of common human experiences.

A line of research has been conducted to examine the benefits of self-compassion for mental health. Empirical studies have demonstrated that self-compassion is positively correlated with positive affect, while it is inversely correlated with negative affect (Leary et al., 2007; Neff et al., 2007; Neff & Vonk, 2009). A number of studies have shown that self-compassion is negatively correlated with anxiety and depression (Neff, 2003a; Neff, 2003b; Neff, Hsieh, & Dejitterat, 2005; Neff, Kirkpatrick, & Rude, 2007; Neff, Pisitsungkagarn, & Hsieh, 2008; Neff, Rude, & Kirkpatrick, 2007; Neff, & Vonk, 2009; Ying, 2009; Raes, 2010). These relationships remain significant even after controlling other factors such as self-esteem, and self-criticism that have been deemed to be associated with depression and anxiety (Neff, 2003a; Neff, Kirkpatrick, & Rude, 2007). Neff and colleagues (2008) conducted a cross-cultural study that measured self-compassion among students in the U.S, Thailand, and Taiwan, after a perceived personal failure (i.e., a low mid-term grade). The results revealed that self-compassion was positively correlated with positive reinterpretation, $r = .24, p < .01$, and with acceptance, $r = .22, p < .05$. In another study, self-compassion was associated with self-reported happiness $r = .57, p < .05$, and optimism, $r = .62, p < .05$ (Neff et al., 2007).

Emotional Approach Coping

A large body of the coping literature focuses on problem-solving (i.e., coping through changing the source of the stressors) and emotion-focused coping (i.e., coping through alleviating negative emotions associated with the stressors; Endler & Parker,

1990b; Lazarus & Folkman, 1984). Previous research suggests that emotion-focused coping was related to distress and dysfunction (Stanton, Danoff-Burg, Cameron, & Ellis, 1994). However, such findings were based on the distorted perspectives on emotion that focus solely on its disorganizing and maladaptive functioning (Averill, 1990; Thompson, 1991). In addition, there were the intrinsic problems in the conceptualization and assessments of emotion-focus coping, because such assessments include disparate coping styles, such as denial and seeking social support (Stanton et al., 1994). Therefore, some of the subscales in emotion-focused coping are inversely correlated (Scheier et al, 1986). In addition, the existing measurements for the emotional approach contain items associated with distress and self-deprecation. For example, these measurements include items such as “become very tense” “focus on my general inadequacies” (Endler & Paker, 1990a), or “take it out on other people when I feel angry or depressed” (Moos, 1988). C

As opposed to the past research focusing on negative aspects of emotional coping, recent theorists point to the primarily adaptive function of emotion and its expressions (Campos, Mumme, Keronian, & Campos, 1994; Clore, 1994; Ekman, 1994; Thompson, 1994). A body of empirical evidence has emerged, emphasizing the importance of adaptive emotional processing and expression (Pennebaker, 1989, 1993; Pennebaker, Mayne, & Francis, 1997; Smyth & Pennebaker, 1999). In a similar vein, Stanton and colleagues (2000) defined emotional approach coping as “effortful attempts to approach one’s emotions in response to situations appraised as taxing or exceeding one’s resources” (Stanton, Kirk, Cameron, & Danoff-Burg, 2000, p. 1151). Based on existing coping style measurements, the authors developed the Emotional Approach

Coping Scale (EACS). In this scale, the items are not contaminated with distress and self-deprecating related items. According to the exploratory and confirmatory factor analyses, two factors emerged: Emotional Processing (i.e., intentionally making an effort to understand and validate one's emotions) and Emotional Expression (i.e., feeling free to express emotions in both verbal and nonverbal manners; Stanton et al., 2000). Subsequent empirical studies proved strong support for the EACS's psychometric soundness in terms of reliability, convergent and discriminant validity, and predictive utility (Austenfeld & Stanton, 2004; Stanton et al., 2000). Detailed information for this measurement is provided in Chapter 3.

The literature suggests that individuals can benefit from emotional approach coping because it promotes psychological adjustment and enhances one's ability to cope with stress (Stroebe, Schut, & Stroebe, 2005). Furthermore, it leads to clarification or pursuit of one's goals (Stanton et al., 2002; Stanton et al., 2000). The research with regard to the relationship between emotional approach coping and other coping styles has been extensively investigated. For instance, Stanton and colleagues (2000) conducted a study with a sample of 400 college students. They found that emotional processing was positively correlated with seeking social support ($r = .44$), as well as with problem-focused coping ($r = .47$). Emotional expression was also positively associated with seeking social support ($r = .56$), and problem-focused coping ($r = .26$).

In addition, empirical findings support the associations between emotional approach coping, and anxiety and depression. Austenfeld, Paolo, and Stanton (2006) found that medical students who scored high on emotional expression and processing endorsed fewer depressive symptoms when writing on emotional topics. Additionally, a

study with a sample of fibromyalgia patients pointed to the link between emotional expression and mental disorders such as depression. In writing on emotional topics, the patients who had a high score on emotional approach coping reported lower depressive symptoms (Broderick, Junghaenel, & Schwartz, 2005). Smith, Lumley, and Longo (2002) found that among patients suffering chronic pain, emotional processing and expression were inversely correlated with depression ($r=-.33$; $r=-.21$, respectively) and negative affect ($r=-.33$; $r=-.21$, respectively). In a similar vein, anxiety and negative emotion increased among breast cancer patients when they suppressed emotions (Iwamitsu, Shimoda, Abe, Tani, Okawa, & Buck, 2005). A meta-analysis study supported the beneficial role of emotional disclosure through writing in improving physical health (Smyth, 1998).

Sex differences in emotional approach coping have been noted. College female students tended to utilize more emotional approach coping than the male counterparts (Berghuis & Stanton, 2002; Stanton et al., 2000). In contrast, one study showed that men with chronic pain reported better functioning when they utilized emotional approach coping than did women with chronic pain (Smith et al., 2002). In addition to gender differences, a line of research has investigated the applicability of emotional approach coping in another cultural context. Zangi, Garratt, Hagen, Mowinckel, and Finest (2009) found that the Norwegian version of the Emotional Approach Coping Scale (EAC) confirmed its two factors, emotional processing and emotional expressing with high internal consistency. Durak and Senol-Durak (2011) supported that the Turkish version of the EAC had sufficient internal consistency and test-retest reliability, as well as concurrent validity.

Summary of Literature Review

The majority of the literature reviewed focuses on perfectionism by examining findings from both theoretical and empirical literature. First of all, the studies pertaining to the evaluative nature of perfectionism were reviewed. Wu and Wei (2008) emphasized the critical role of a high need for reassurance and a low capacity of self-reinforcement in the development of depression and anxiety among perfectionists with concerns for evaluation. Flett et al. (2003) also claimed that conditional self-worth plays a crucial role in the development of depression in perfectionists, especially socially prescribed perfectionists. Also, Tangney (2002) highlighted self-evaluative emotions of perfectionism, focusing on shame. Ashby et al.'s (2006) study supports that shame partially mediated the path to depression for women with maladaptive perfectionism.

Second, this literature review includes empirical findings regarding the development of perfectionism in terms of attachment as well as the effects of perfectionism on psychological distress. Rice and Mizadeh (2000) found that adaptive perfectionists are likely to be characterized by secure attachment, while maladaptive perfectionists are less likely to be academically integrated and more vulnerable to depression. Another study by Rice and Lopez (2004) provides further evidence that individuals with higher insecure attachment and maladaptive perfectionism are more likely to suffer from low self-esteem. Wei et al.'s (2004) study also confirmed that maladaptive perfectionism mediated the relationship between attachment style and depressive mood. Apart from the relationships between attachment and perfectionism, this review includes a discussion of how perfectionism also plays a role in psychological distress involving interpersonal relationships. Sherry and colleagues (2008) concluded

that perceived social support was a mediator between socially prescribed perfectionism and depressive symptoms. They also found that social anxiety and socially prescribed perfectionism were associated with the discrepancy between perception of one's self and others in appraising one's own self-efficacy in an anticipated interpersonal interaction (2008).

Lastly, the literature review includes a discussion of the empirical studies of perfectionism in terms of culture. Castro and Rice (2003) provided evidence that Asian American students reported significantly higher perfectionism than either African or Caucasian American students. Also, both Asian and African American students endorsed higher parental expectations. Nilsson et al. (2008) found that perfectionism and acculturation were robust predictors for stress among Asian international students. Wei et al. (2007) further highlighted that acculturative stress and perfectionism were strongly related to depression among Chinese international students.

However, it is important to take into account several limitations of the studies reviewed herein. Commonly, the studies used self-report based on correlational designs, so causal relationships cannot be inferred. A number of the empirical studies used structural equation modeling to examine the mediating effects of psychological constructs on the relationship between maladaptive perfectionism and psychological distress. Despite the sophisticated analysis procedure of structural equation modeling, the researchers need to be cautious in making causal inferences. In addition, the predominance of women in the samples in most studies may limit the generalizability of the results to other populations.

Given the importance of such findings, which provided a better understanding of perfectionism, it is important to consider the counseling implications of these findings. Based on Wu and Wei's findings (2008), counselors can help individuals with perfectionism to diminish their excessive need for approval and reassurance from others, as well as promote self-positive statements. Also, it could be beneficial for counselors to help perfectionists explore how their excessive need for approval is related to anxiety and depression. Consistent with the findings from Flett, Davis and Hewitt's study (2003), counselors may need to help clients with perfectionism to foster self-acceptance irrespective of the outcomes of performance. Moreover, given the evidence that internalized shame among maladaptive perfectionists might exert an aversive effect on self-esteem and depression (Ashby, Rice, & Martin, 2006), counselors can benefit from assessing maladaptive perfectionism among clients who suffer from depression, low self-esteem, or shame.

Most of all, it is crucial to explore the quality of the intimate relationships of clients, because insecure attachment might underlie the presenting maladaptive perfectionistic symptoms (Rice, & Lopez, 2004). Also, it is noteworthy that it might be difficult to establish a therapeutic relationship with clients with perfectionist traits. This might be attributable to their great sensitivity to perceived criticism, apart from the fact that many maladaptive perfectionists are likely to have insecure attachment style (Rice, & Lopez, 2004). Wei and his colleagues (2004) suggested that counselors might incorporate interventions targeting maladaptive perfectionism because it may not be feasible to change insecure attachment styles. Lastly, Rice and Mirzadeh (2000) highlighted that counselors need to help clients to distinguish between maladaptive (e.g.,

concerns for evaluation or mistake) and adaptive perfectionism (e.g., achieving realistic personal standards), so clients can be reassured because they do not need to give up their adaptive perfectionistic behaviors. Counselors may also need to pay attention to how maladaptive perfectionistic characteristics of clients can be manifested and interplay in interpersonal relationships. Also, counselors may want to explore how clients' maladaptive perfectionism can isolate themselves from social support.

It is also noteworthy to pay attention to the cultural considerations with regard to perfectionism. Given that Asian American students are more likely to present perfectionistic traits due to their upbringing which emphasizes academic attainment and high personal standards, it is important to assess maladaptive perfectionistic traits in working with Asian Americans struggling with depression and low self-esteem. In working with international students, counselors may need to educate international students on how acculturative stress and maladaptive perfectionism interplay in the development of depression, in order to increase their self-awareness (Wei et al., 2007). Also, it is important for counselors to help international students develop an understanding of the process of acculturation. At the same time, counselors can provide international students with resources that might help them adjust to a new culture, as well as information about the American culture including social norms and expectations (Nilsson et al.'s, 2008).

Along with the literature review on perfectionism, self-compassion and emotional approach coping were introduced with relevant empirical studies in this literature review chapter.

Self-compassion, created based on Buddhism, entails three components, self-kindness, common humanity, and mindfulness (Neff, 2003a). The Self-Compassion Scale (Neff, 2003b) was developed to assess these three self-compassion components and the corresponding reverse components: self-judgment, isolation, and over-identification. Individuals who are compassionate to themselves tend to preserve their self-worth, be aware of social connection, and be mindful of their thoughts and emotions, even in times of failures. Empirical studies support that self-compassion is distinct from other self-constructs such as self-esteem, or self-pity. Different from self-esteem involving one's evaluation of self-worth, self-compassion embraces unconditional acceptance (Neff & Vonk, 2009). When individuals experience self-pity, they are susceptible to withdrawing themselves from others. Conversely, individuals with self-compassion strive to relate to others, reminding themselves that they are not alone when struggling with inadequacies and failure (Neff, 2003a). A number of studies supported that self-compassion promotes psychological well-being, demonstrating the significant, and inverse relationship between self-compassion and psychological distress (Neff, 2003a; Neff, 2003b; Neff, Hsieh, & Dejitterat, 2005; Neff, Kirkpatrick, & Rude, 2007; Neff, Pisitsungkagarn, & Hsieh, 2008; Neff, Rude, & Kirkpatrick, 2007; Neff, & Vonk, 2009; Ying, 2009; Raes, 2010).

In addition to self-compassion, the new construct, emotional approach coping was also introduced in this review section. While previous research linked emotion-focused coping to distress and dysfunction with the emphasis on denial and over-identification, Stanton and colleagues (2000) emphasized the adaptive functions of emotion as a coping strategy and developed the Emotional Approach Coping Scale with

two subscales, emotional processing and emotional expression. The empirical findings support that emotional approach coping was positively related to problem-focused coping and to seeking social support (Stanton et al., 2000). Emotional approach coping also served to reduce depressive and anxiety symptoms (Broderick, Junghaenel, & Schwartz, 2005; Iwamitsu et al., 2005; Smith, Lumley, & Longo, 2002). Sex differences were also found in emotional approach coping, in that women are more likely than men to engage in emotional processing and expression (Berghuis & Stanton, 2002; Stanton et al., 2000). In addition, cross-cultural studies showed that the Emotional Approach Coping Scale was psychometrically sound when it was translated into Norwegian Zangi, Garratt, Hagen, Mowinckel, & Finest, 2009) and Turkish (Durak & Senol-Durak, 2011).

Current Study

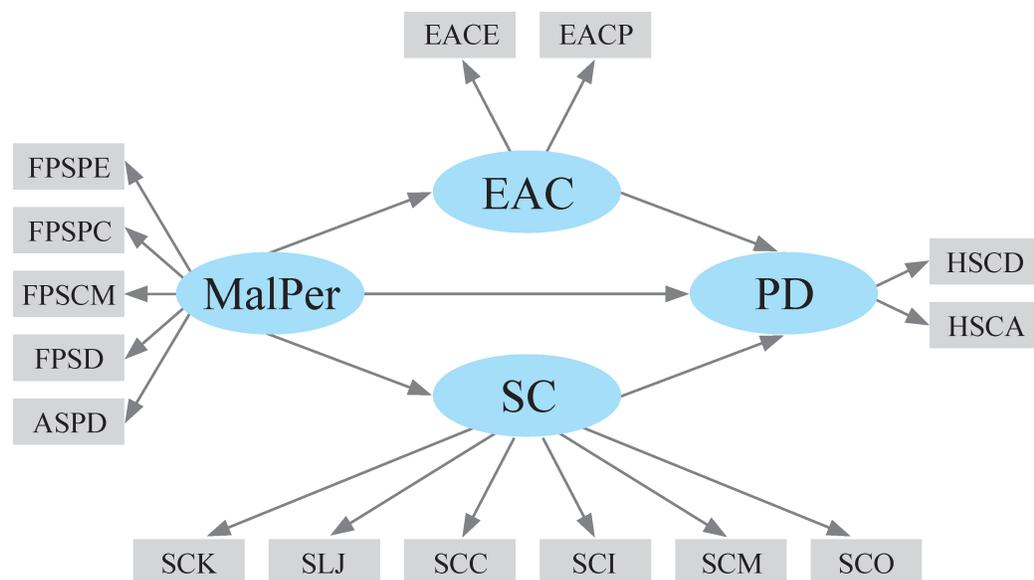
This chapter reviewed the literature that supports the harmful and detrimental impact of maladaptive perfectionism on psychological distress. In particular, Asian Americans and Asian international students were found to be prone to developing maladaptive perfectionism, given their parents' high standards and expectations. Considering perfectionism as a stable personality trait, perfectionists are reluctant to relinquish their high personal standards that may elicit aspired benefits and rewards (Flett & Hewitt, 2002; Slaney, Rice & Ashby, 2002). Therefore, a number of studies have been conducted to identify psychological constructs that may serve to mediate the relationship between perfectionism and psychological distress. Psychological variables, identified as mediators, can be targeted to reduce the magnitude of the relationship between maladaptive perfectionism and psychological distress.

In this regard, the main focus of the present study sought to identify whether self-compassion and emotional approach coping, recently developed psychological constructs, serve as mediators in the relationship between maladaptive perfectionism and psychological distress (See Figure 1). Burgeoning research has emerged to investigate the impact of self-compassion and emotional approach coping on psychological distress. As mentioned above, self-compassion was significantly inversely related with maladaptive perfectionism and psychological distress such as depression and anxiety (Neff, 2003b). Emotional approach coping was also considered to serve to decrease psychological distress (Austenfeld, Paolo, & Stanton, 2006; Broderick, Junghaenel, & Schwartz, 2005; Iwamitsu et al., 2005). The empirical findings reveal that emotional dysregulation served to exacerbate the relationship between maladaptive perfectionism and psychological distress (Aldea, & Rice, 2006). Consequently, it is worthwhile to investigate the mediating role of emotional approach coping in maladaptive perfectionism and psychological distress.

In particular, this study focused on the population of Asian international students. Despite their susceptibility to maladaptive perfectionism due to their parents' high standards and expectations for educational and career attainment, few empirical studies have been conducted to investigate the impact of maladaptive perfectionism on psychological stress among Asian international students. To this author's knowledge, the present study is the first to examine the roles of self-compassion and emotional approach coping in the relationship between maladaptive perfectionism and psychological distress among East Asian international students. Thus, the nature of this study is exploratory. In addition to examining the mediating roles of self-compassion

and emotional approach coping, this study investigated the degree to which maladaptive perfectionism, self-compassion, and emotional approach coping are predictive of psychological distress among international students. Finally, this study also examine whether self-compassion, and emotional approach coping moderate the relationship between maladaptive perfectionism and psychological distress.

Figure 1. An original conceptual model for Structural Equational Modeling



Note. MalPer: Maladaptive Perfectionism, EAC: Emotional Approach Coping, SC: Self-Compassion, PD: Psychological Distress. FPSPE=Parent Expectation, FPSPC= Parent Criticism, FPSCM=Concern for Mistake, FPSD=Doubt for Action, APSD=Almost Perfect Scale-Revised, Discrepancy, SCK=Self-Kindness, SCJ=Self-Judgment, SCC=Common Humanity, SCI=Isolation, SCM=Mindfulness, SCO=Over-Identification. EACP=Emotional Processing, EACE=Emotional Expression, HSCA= Hopkins Symptom Checklist-25-Anxiety, and HSCD= Hopkins Symptom Checklist-25-Depression

Chapter 3

Method

Participants

Data were collected from 255 East Asian international students enrolled in a large Midwestern public university. Participants consisted of 157 (62%) women and 98 (38%) men with a mean age of 24.08 years ($SD=4.09$). The participants indicated their country of origin as follows: China (61%), Korea (25%), Japan (4%), Taiwan (1.5%), and Other (2%), and this distribution reflects the population of East Asian international students enrolled in this institution. Approximately half of the participants were undergraduate students (48%) and the other half were graduate students (50%). More detailed information concerning the participants' demographics is discussed in Chapter 4.

Procedures

A pilot study was conducted with eight East Asian international graduate students. They completed an online survey and were asked to provide feedback to identify ambiguities and difficult questions. Based on their feedback, the survey was revised (See Appendix A-G). In particular, several students reported having difficulty understanding several idioms or colloquial expressions used in the measurements. Thus, the definitions or meanings for such idioms and colloquial expression were provided (e.g., *delve into: to try hard to find out more information about something, or *keyed up: nervous). The time taken to complete the survey was also measured, and it ranged from 15 to 30 minutes.

After finalizing the online survey and upon approval from the University of Minnesota Institutional Review Board, this investigator asked the International Student and Scholar Services (ISSS) to send an e-mail invitation to East Asian students through their email listserv. The e-mail invitation encouraged East Asian students to participate in the online survey. Participants were instructed to read a consent form (see Appendix A), and to indicate their agreement for the participation by clicking a “yes” button. Participants were told that the purpose of the current study was to learn about self-attitudes and emotional experiences of international students. After completing an online survey that took 15-30 minutes, participants were asked to provide their email address if they wanted to receive \$5 gift card for compensation of their time. It was clarified that their email address would be solely used to deliver a gift card. Participants received a gift card within two weeks after their completion of the survey. Since a small number of East Asian male international students participated, the follow-up email invitation was sent to only the East Asian male students enrolled in the institution.

Measurements

Maladaptive Perfectionism. Consistent with previous studies (e.g., Blankstein & Dunkley, 2002; Wei et al., 2004; Wu & Wei, 2008), the latent variable of maladaptive perfectionism was measured by the following scales: the Discrepancy subscale from the Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashbly, 2001), and the Concern Over Mistakes subscale, and Doubts About Action subscale from the Frost Multidimensional Perfectionism Scale (FMPS; Frost, Marten, Lahart, & Rosenblate, 1990). Along with these scales, the Parental Criticism, and Parental Expectation scales from the FMPS were added to measure maladaptive perfectionism, in

order to tap into the impact of parental expectation and criticism on East Asian international students.

Self-Compassion. The 26-item Self-Compassion Scale, developed by Neff (2003b), includes six subscales: Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness, and Over-identification. Each item is rated on a 5-point Likert scale, ranging from 1 (*almost never*) to 5 (*almost always*). A sample item for each subscale is as follows: “When I’m going through a very hard time, I give myself the caring and tenderness I need” (Self-Kindness), “I’m disapproving and judgmental about my own flaws and inadequacies” (Self- Judgment), “When I’m down and out, I remind myself that there are lots of other people in the world feeling like I am” (Common Humanity), “When I fail at something that’s important to me, I tend to feel alone in my failure” (Isolation), “When something painful happens, I try to take a balanced view of the situation” (Mindfulness), and “When I’m feeling down I tend to obsess and fixate on everything that’s wrong” (Over-Identification). Internal consistency for the SCS ranged from .92 to .94 (Neff, 2003a; Neff, Hsieh, & Dejitterat, 2005). The SCS has demonstrated high test-retest reliability over three weeks ($\alpha = .93$). According to Neff (2003b), the subscales in the SCS are highly correlated with each other, ranging from $|r| = .46$ to $|r| = .87$.

Emotional Approach Coping. The Emotional Approach Coping Scale (EACS) is a self-report scale to assess emotional coping, on a 4-point Likert scale (1= “I usually don’t do this at all” to 4= “ I usually do this a lot”). The range of the EACS sores is from 0 to 32, meaning that individuals with high scores on the EACS are likely to be more emotionally aware and expressive than those with low scores. The EACS consists of two

empirically validated subscales, Emotional Processing (EP) and Emotional Expression (EE). The EP assesses one's active effort to acknowledge and validate emotions with four items including "I take time to figure out what I'm really feeling," and "I delve into my feelings to get a thorough understanding of them." The EE is designed to measure outward emotional expressions and includes four items such as "I take time to express my emotion," and "I let my feelings come out freely." The EACS has demonstrated high internal consistency ($\alpha = .92$) and test-retest reliability ranging from .74 to .78 (Stanton et al., 2000). The EAC was also translated into Turkish and showed internal consistencies ranging from .83 to .93 (Senol-Durak, & Durak, 2011).

Psychological Distress. The Hopkins Symptom Check List (HSCL-25; Hesbacher, Rickels, & Morris, 1980) is an abbreviated version of the original 90-item HSCL (Parloff, Kelman, & Frank, 1954). The HSCL-25 is a symptom inventory used to assess severity of anxiety (10 items) and depressive symptoms (15 items). Each item is rated on a 4-point Likert scale from 1 ("Not at all") to 4 ("Extremely"). The HSCL-25 score was calculated as the sum score of items divided by the number of items, and the scores for the subscales, anxiety and depression, were calculated in the same manner. The sample items for anxiety include: "being scared for no reason," "feeling fearful," "heart racing," or "feeling panic." For depression, the sample items are as follows: "feeling low in energy," "crying easily," "thinking of ending one's life," or "feeling everything is an effort." The HSCL-25 has shown consistency between physician assessment and patient ratings of anxiety and depressive symptoms. It has also served as a screening tool to identify patients who were previously undiagnosed but experiencing significant emotional distress (Rickels, Lipman, Garcia, & Fisher, 1972). The HSCL-25

has also been translated into a number of languages such as Cambodian, Japanese, Laotian, and Vietnamese, and has been widely used in screening refugees (Mounaoutoua, & Brown, 1995).

Demographics. A questionnaire was developed to assess students' demographics, including their gender, age, a country of origin, and length of stay in the United States. Participants were asked to verify that they are international students by answering "Yes." An item about their education level was added (i.e., an undergraduate student, a graduate student, or other). Participants were asked to rate their English proficiency on a 4-point Likert scale from 1 (poor) to 4 (excellent), and to report their GPA and their satisfaction with their GPA by rating on a 5-point Likert scale (1=very dissatisfied, and 5=very satisfied). Their personal relationship status was also asked, and then, if they were married, they were asked whether they had children. Whether participants had a religious affiliation was also assessed. If so, they were asked to name their religion.

Hypotheses

The hypotheses in this study were generated and tested as follows:

1. Maladaptive perfectionism, self-compassion, and emotional approach coping contribute unique and shared variance in the prediction of psychological distress among East Asian international students.
2. Self-compassion and emotional approach coping mediate the relationship between maladaptive perfectionism and psychological distress among East Asian international students.

3. Self-compassion and emotional approach coping moderate the relationship between maladaptive perfectionism and psychological distress among East Asian international students.

Therefore, the following null hypotheses were developed.

Ho1: Maladaptive perfectionism, self-compassion, and emotional approach coping will not coping contribute unique and shared variance in the prediction of psychological distress among East Asian international students.

Ho2: Self-compassion and emotional approach coping will not mediate the relationship between maladaptive perfectionism and psychological distress among East Asian international students.

Ho3: Self-compassion and emotional approach coping will not moderate the relationship between maladaptive perfectionism and psychological distress among East Asian international students.

Data Analyses

The procedure for data analyses in this study was as follows:

1. Missing data was handled by using multiple imputation.
2. Cronbach's alpha was calculated for all the main variables to determine the degree of internal consistency among items.
3. Skewness and Kurtosis were calculated to ensure that the assumption for normality was not violated.
4. Means, standard deviations, and ranges were obtained for demographic items and measures.

5. Zero-order correlations for the main variables were calculated to examine the relationships among the variables. Finding no relationship between emotional approach coping and psychological distress would mean that emotional approach coping did not meet the assumptions as a mediator
6. Hierarchical Regression Analyses were conducted to examine whether maladaptive perfectionism, self-compassion, and emotional approach coping predicted psychological distress.
7. Finding no relationships between self-compassion subscales with positive aspects and the counterparts with negative aspects, exploratory factor analysis were performed to determine the factors for self-compassion.
8. Two factors emerged: Self-Compassion vs. Self-Disrespect. The Self-Compassion factor included self-compassion subscales with positive aspects such as self-kindness, common humanity, and mindfulness. Self-Disrespect factor consisted of self-compassion subscales with negative aspects including self-judgment, isolation, and over-identification.
9. Structural equation modeling was conducted to investigate the roles of two Self-Compassion factors in mediating the relationship between maladaptive perfectionism and psychological distress.
10. Hierarchical Regression Analysis was then conducted to examine whether Self-Disrespect moderated the relationship between maladaptive perfectionism and psychological distress.

Chapter 4

Results

Preliminary Analyses

Missing Data. Initially, 263 East Asian international students completed the online survey. Among these participants, two who missed more than 15 % of the items were removed from this study. Those who did not identify themselves as international students were also excluded ($n=4$). In addition, four participants who skipped either demographics or one of subscales were also excluded. Accordingly, the sample size of the current study was 255. No systematic patterns of missing data were detected; thus, the data were treated as missing completely at random (MCAR). In handling MCAR data, Schlomer, Bauman, and Card (2010) recommend Multiple Imputation (MI) using the EM approach. Thus, MI was used to impute 170 values (0.05 % of the total data).

Demographics. As presented in Table 1, the sample of the current study comprised 157 female and 98 male participants. Regarding age, 41.2 % of participants were in the age 18-22 group, while 47.5% of participants were in the age 23-30 group ($M=24.76$, $SD=4.71$). One seventy one (61.7%) participants identified their country of origin as China, 64 (25.1%) as Korea, 11 (4.3%) as Japan, 4 (1.6 %) as Taiwan and 5 (2%) as Other. This reflects the population of East Asian International students in the institution. Concerning education level, there were 123 (48.2%) undergraduate students and 128 (50.2%) graduate students. This mean of years in the U.S was 3.54 years ($SD=2.29$, range = 1-20). Of these students, 152 (59.2%) reported being single, while others had a married or domestic partner, or were in a committed dating relationship. For religious affiliation, most of the participants ($n = 203$; 79.6%) did not describe

themselves as religious. Among those who endorsed a religious affiliation, 34 (65%) participants identified themselves as Christian, 10 (19%) as Buddhist, 6 (12%) as Catholic, and 2 (4%) as Other. Most students rated their English proficiency as either good (53.3%) or excellent (22.7%). In terms of GPA satisfaction, 30 (11.8%) rated themselves as very satisfied, 83 (32.5%) as satisfied, 60 (23.5%) as neutral, 56 (22%) as dissatisfied, and 25 (9.8) as very dissatisfied.

Table 1
Demographic Variables for the Sample (N=255)

Demographic Variables	n	%
Gender		
Female	157	61.6
Male	98	38.4
Age		
18-22 years	105	41.2
23-30 years	121	47.5
Over 31 years	29	11.3
<i>M</i> =24.76		
<i>SD</i> =4.71		
Range=18-43 years		
Country of Origin		
China	171	67.1
Japan	11	4.3
Korea	64	25.1
Twain	4	1.6
Other	5	2
Education Level		
Undergraduate	123	48.2
Graduate	128	50.2
Other	4	1.6
Years in the U.S.		
1 year	25	11.7
2 year	48	22.4
3 year	51	23.8
4 year	34	15.9

5 year	22	10.3
Over 5 years	34	15.9
<i>M</i> =3.54		
<i>SD</i> =2.29		
Range=1-20 years		
<hr/>		
Relationship Status		
Single	152	59.6
Married/Domestic Partner	55	21.6
Committed Dating Relationship	48	18.8
<hr/>		
Have Children		
No	237	92.9
Yes	18	7.1
Religious Affiliation		
No	203	79.6
Yes	52	20.4
	Religion Type	
	- Buddhist	10
	- Catholic	6
	- Christian	34
	- Other	2
<hr/>		
English Proficiency		
Poor=1	6	2.4
Fair=2	55	21.6
Good=3	136	53.3
Excellent=4	58	22.7
<i>M</i> =2.97		
<i>Mdn</i> =3		
<i>SD</i> =.73		
Range=1-4		
<hr/>		
GPA Satisfaction		
Very Dissatisfied=1	25	9.8
Dissatisfied=2	56	22.0
Neutral=3	60	23.5
Satisfied=4	83	32.5
Very Satisfied=5	30	11.8
<i>M</i> =3.15		
<i>Mdn</i> =3		
<i>SD</i> =1.19		
Range=1-5		
<hr/>		

Reliability. Wilkinson and the American Psychological Association Task Forces on Statistical Inference (1999) assert reliability coefficients should be provided. Thus, estimates of internal consistency were examined for all major variables. As shown in Table 2, the results indicated a good level of reliability for most subscales. Cronbach's α for all the subscales, except those for Self-Compassion ranged from .79 to .90. The reliability coefficients for the subscales for Self-Compassion were adequate, ranging from .73 to .80 except for Common Humanity ($\alpha = .69$) and Over-Identification ($\alpha = .68$).

Table 2

Cronbach's Alphas for Measures Maladaptive Perfectionism, Self-Compassion, Emotional Approach Coping, and Psychological Distress

Scale		α
Maladaptive Perfectionism	1. FMPS-PE	.81
	2. FMPS-PC	.79
	3. FMPS-CM	.85
	4. FMPS-DA	.80
	5. APS-R-D	.89
Self-Compassion	6. SCS-SK	.77
	7. SCS-SJ	.74
	8. SCS-CH	.69
	9. SCS-I	.80
	10. SCS-M	.73
	11. SCS-OI	.68
Emotional Approach Coping	12. EACS-EP	.76
	13. EACS-EE	.81
Psychological Distress	14. HSCL25-A	.88
	15. HSCL25-D	.90

Note. FMPS=Frost Multidimensional Perfectionism Scale, FMPS-PE=Parent Expectation, FMPS-PC=Parent Criticism, FMPS-CM=Concern for Mistake, FMPS-DA=Doubt for Action, APS-R-D=Almost Perfect Scale-Revised, Discrepancy, SCS= Self-Compassion Scale, SCS-SK=Self-Kindness, SCS-SJ=Self-Judgment, SCS-CH=Common Humanity, SCS-I=Isolation, SCS-M=Mindfulness, SCS-OI=Over-Identification. EACS=Emotional Approach Coping Scale, EACS-EP=Emotional Processing, EACS-EE=Emotional Expression, HSCL-21= Hopkins Symptom Checklist-25, HSCL25-A=Anxiety, and HSCL25-D=Depression.

Normality. The data were also examined to ensure assumptions for normality. Visual analysis and Q-Q plots did not reveal any concerns about normality. Skewness and kurtosis coefficients (range: 0.01-0.69; see Table 3) also failed to reveal significant departures from normality.

Table 3

Skewness and Kurtosis for Maladaptive Perfectionism, Self-Compassion, Emotional Approach Coping, and Psychological Distress

Scale		<i>Skewness</i>	<i>Kurtosis</i>
Maladaptive Perfectionism	1. FMPS-PE	.01	-.48
	2. FMPS-PC	.46	-.13
	3. FMPS-CM	.22	.24
	4. FMPS-DA	.20	-.47
	5. APS-R-D	.06	-.75
Self-Compassion	6. SCS-SK	-.35	.24
	7. SCS-SJ	-.04	-.35
	8. SCS-CH	-.38	.11
	9. SCS-I	-.03	-.59
	10. SCS-M	-.62	.33
	11. SCS-OI	-.25	-.52
Emotional Approach Coping	12. EACS-EP	-.26	-.40
	13. EACS-EE	-.03	-.31
Psychological Distress	14. HSCL25-A	.64	.16
	15. HSCL25-D	.68	-.08

Note. FMPS=Frost Multidimensional Perfectionism Scale, FMPS-PE =Parent Expectation, FMPS-PC=Parent Criticism, FMPS-CM=Concern for Mistake, FMPS-DA=Doubt for Action, APS-R-D=Almost Perfect Scale-Revised, Discrepancy, SCS= Self-Compassion Scale, SCS-SK=Self-Kindness, SCS-SJ=Self-Judgment, SCS-CH=Common Humanity, SCS-I=Isolation, SCS-M=Mindfulness, SCS-OI=Over-Identification. EACS=Emotional Approach Coping Scale, EACS-EP=Emotional Processing, EACS-EE=Emotional Expression, HSCL-25= Hopkins Symptom Checklist-25, HSCL25-A=Anxiety, and HSCL25-D=Depression.

MANOVA

Prior to the main analyses, a series of multivariate analyses of variances (MANOVAs) were conducted to examine if dependent variables varied as a function of gender, education level, relationship status, and religion. The results revealed the main effect for gender and for education level on the measures. It was not possible to compare the different country of origin groups on the measures, as China (67.1%) was predominant, followed by Korea (25.1%), with only a small number of students from other East Asian countries such as Japan or Taiwan.

Gender. There was a significant main effect for gender, Wilks's $\lambda=.883$, $F(15, 239)= 2.12$, $p < .01$. Significant differences in the mean scores of the following subscales were found: emotional approach coping subscales, EACS-EP, $F(1, 253)= 12.22$, $p < .01$, and EACS-EE, $F(1, 253)= 4.83$, $p < .05$; psychological distress scales, HSCL25-A, $F(1, 253)= 4.92$, $p < .05$, and HSCL25-D, $F(1, 253)= 10.38$, $p < .01$; and self-compassion scales, SCS-SJ, $F(1, 253)= 6.44$, $p < .05$, SCS-I, $F(1, 253)= 5.71$, $p < .05$, and SCS-OI, $F(1, 253)= 8.02$, $p < .01$). This indicated females were more likely than males to utilize emotional approach coping styles including emotional processing and expression, and they tended to endorse greater anxious and depressive symptoms than males. The results also indicated males were less likely than females to engage in self-judgment, isolation, and over-identification.

Education Level. The MANOVA revealed that undergraduate students and graduate students statistically differed significantly on the measures, Wilk's $\lambda=.873$, $F(15, 235)= 2.27$, $p < .01$. Further tests of between-subjects effects revealed significant differences in mean scores for the following variables: a maladaptive perfectionism

subscale, FPSPE, $F(1, 249) = 13.27, p < .01$, and a psychological distress subscale, HSCL21-A, $F(1, 249) = 5.91, p < .05$. These results suggest that undergraduate students are more likely than graduate students to experience parental expectations and to endorse anxiety symptoms.

Descriptive Analyses

Table 4 contains a summary of means, standard deviations, and ranges for all of the major measurement variables. Means and standard deviations for all variables were generally comparable to those observed in other studies with similar college student samples (Castro & Rice, 2003; Neff, 2003b; Stanton et al., 2000; Wei et al., 2004).

Table 4

Means and Standard Deviations for Maladaptive Perfectionism, Self-Compassion, Emotional Approach Coping, and Psychological Distress

Scale		<i>M</i>	<i>SD</i>	<i>Range</i>
Maladaptive Perfectionism	1. FMPS-PE	14.72	4.23	5-25
	2. FMPS-PC	9.22	3.24	4-18
	3. FMPS-CM	24.95	6.54	9-45
	4. FMPS-DA	10.63	3.43	4-29
	5. APS-R-D	43.66	15.93	12-84
Self-Compassion	6. SCS-SK	15.66	3.84	5-25
	7. SCS-SJ	14.22	3.73	5-24
	8. SCS-CH	12.47	3.25	4-20
	9. SCS-I	11.26	3.47	4-20
	10. SCS-M	13.39	3.00	4-20
	11. SCS-OI	11.46	3.16	4-20
Emotional Approach Coping	12. EACS-EP	11.21	2.75	4-16
	13. EACS-EE	9.75	2.80	4-16
Psychological Distress	14. HSCL25-A	1.81	.56	.99-3.70
	15. HSCL25-D	1.83	.54	1-3.53

Note. FMPS=Frost Multidimensional Perfectionism Scale, FMPS-PE =Parent Expectation, FMPS-PC=Parent Criticism, FMPS-CM=Concern for Mistake, FMPS-DA=Doubt for Action, APS-R-D=Almost Perfect Scale-Revised, Discrepancy, SCS= Self-Compassion Scale, SCS-SK=Self-Kindness, SCS-SJ=Self-Judgment, SCS-CH=Common Humanity, SCS-I=Isolation, SCS-M=Mindfulness, SCS-OI=Over-Identification. EACS=Emotional Approach Coping Scale, EACS-EP=Emotional Processing, EACS-EE=Emotional Expression, HSCL-25= Hopkins Symptom Checklist-25, HSCL25-A=Anxiety, and HSCL25-D=Depression.

Zero order correlations between major variables were also examined, as presented in Table 7. There did not appear to be evidence of multicollinearity among the variables (variance inflation factor values ranged between 1.00 and 1.65). As would be expected, correlations between scores within the same construct tended to be greater than scores between different constructs. Interestingly, such consistency was not found within the self-compassion construct. The positive SCS scales, such as self-kindness (SCS-SK), common humanity (CH), and mindfulness (SCS-M), were significantly correlated, ranging from $r = .67-.72$ ($p < .01$). Likewise, at the $p < .01$ level, correlations ranging from $.68-.72$ were found among the negative SCS scales, including self-judgment (SCS-SJ), isolation (SCS-I), and over-identification (SCS-O). The existing literature showed that the positively worded SCS subscales were significantly negatively correlated with corresponding negatively worded SCS subscales (Neff, 2003b). However, the results of the present study revealed that the positive SCS scales and the corresponding negative SCS scales were not statistically correlated with each other. For instance, self-kindness (SCS-SK) was not related to self-judgment (SCS-SJ), $r = .06$. Likewise, there was no association between common humanity (SCS-CH) and isolation (SCS-I), $r = .09$. Lastly, mindfulness (SCS-M) and over-identification (SCS-OI) were not significantly correlated, $r = .04$. Over-identification (SCS-OI), however, showed positive correlations with both self-kindness (SCS-SK) and common humanity (SCH), $r = .14, p < .05$, and $r = .15, p < .05$, respectively.

The criterion variables in this study were two subscales for psychological distress, anxiety (HSCL25-A) and depression (HSCL25-D). A high positive correlation was found between anxiety (HSCL25-A) and depression (HSCL25-D), $r = .75 p < .01$.

The correlations between the two criterion variables and other predictor variables were also examined. Anxiety (HSCL25-A) and depression (HSCL25-D) were positively related with all of the subscales for maladaptive perfectionism, as well as all of the negative SCS scales for self-compassion, at the $p < .01$ levels. In contrast, anxiety (HSCL25-A) and depression (HSCL25-D) were not significantly correlated with the positive SCS subscales for self-compassion, except mindfulness (SCS-M), $r = .15, p < .01$, and $r = .11, p < .05$, respectively. Contrary to our hypotheses, the two subscales for emotional approach coping styles, emotional processing (EACS-EP) and emotional expression (EACS-EE), were not correlated with either anxiety (HSCL25-A) or depression (HSCL25-D).

Table 5*Correlations for Maladaptive Perfectionism, Self-Compassion, Emotional Approach Coping, and Psychological Distress*

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. FMPS-PE	-														
2. FMPS-PC	.62**	-													
3. FMPS-CM	.57**	.53**	-												
4. FMPS-DA	.37**	.53**	.57**	-											
5. APS-R-D	.32**	.42**	.56**	.64**	-										
6. SCS-SK	-.06	-.14*	-.17**	-.13*	-.12*	-									
7. SCS-SJ	.18**	.19**	.43**	.39**	.55**	.06	-								
8. SCS-CH	.00	.14**	-.09	-.08	-.06	.67**	.25**	-							
9. SCS-I	.21**	.25**	.45**	.43**	.60**	.03	.68**	.08	-						
10. SCS-M	-.08	.21**	-.1*	-.17**	-.16**	.70**	.17**	.70**	-.04	-					
11. SCS-OI	.26**	.21**	.44**	.35**	.52**	.14*	.72**	.15*	.72**	.04	-				
12. EACS-EP	.07	-.11*	.18	-.04	-.05	.25**	.08	.30**	.04	.29**	.08	-			
13. EACS-EE	.04	-.15*	-.15**	-.20**	-.19**	.34**	.01	.33**	-.09	.27**	.02	.41**	-		
14. HSCL25-A	.23**	.32**	.45**	.44**	.47**	.12	.43**	.03	.49**	-.11*	.49**	.02	-.01	-	
15. HSCL25-D	.27**	.36**	.44**	.48**	.55**	.00	.47**	.01	.59**	-.15*	.53**	-.05	-.12*	.75**	-

Note. ** $p < .01$ two-tailed tests; * $p < .05$ two-tailed tests. FMPS=Frost Multidimensional Perfectionism Scale, FMPS-PE =Parent Expectation, FMPS-PC= Parent Criticism, FMPS-CM=Concern for Mistake, FMPS-DA=Doubt for Action, APS-R-D=Almost Perfect Scale-Revised, Discrepancy, SCS= Self-Compassion Scale, SCS-SK=Self-Kindness, SCS-SJ=Self-Judgment, SCS-CH=Common Humanity, SCS-I=Isolation, SCS-M=Mindfulness, SCS-OI=Over-Identification. EACS=Emotional Approach Coping Scale, EACS-EP=Emotional Processing, EACS-EE=Emotional Expression, HSCL-25= Hopkins Symptom Checklist-25, HSCL25-A=Anxiety, and HSCL25-D=Depression.

Hierarchical Regression Analyses

Hierarchical regression analyses were conducted to assess the contribution of the predictor variables including maladaptive perfectionism, self-compassion, and emotional approach coping, in predicting psychological distress. Prior to performing hierarchical regression analyses, standardizing all of the variables of interest was done in order to reduce multicollinearity (Aiken & West, 1991; Frazier et al., 2004). Two parallel hierarchical regression analyses were conducted for anxiety (HSCL25-A) and depression (HSCL25-D). As noted above, the MANOVA analyses showed a main effect for both gender and education level on the measurement variables. To control for such effect, gender and education level were entered as covariates on Step 1 for each hierarchical regression. Subsequently, the variables assessing maladaptive perfectionism were entered on Step 2. Next, self-compassion subscales were entered on Step 3. Lastly, the variables related to emotional approach coping were entered on Step 4.

As shown in Table 8, after controlling for gender and education level, the variables for maladaptive perfectionism accounted for 27% of the variance in anxiety (HSCL25-A; $\Delta R^2 = .27, p < .001$). The subscales for self-compassion also contributed additional variance in anxiety ($\Delta R^2 = .09, p < .001$). However, emotional approach coping did not contribute unique variance to the prediction of anxiety. Similarly, as illustrated in Table 9, after controlling for gender and education, the maladaptive perfectionism variables in Step 2 accounted for 34% of the variance in depression ($\Delta R^2 = .34, p < .001$). The self-compassion variables also contributed unique variance in predicting depression ($\Delta R^2 = .11, p < .001$). The additional variance accounted for by

the emotional approach coping variables, however, was not statistically significant ($\Delta R^2 = .01, p = .35$).

Of note, expectation (FMPS-PE) and parental criticism (FMPS-PC) were not significant predictors for either anxiety or depression in the regression models, contrary to the correlational analyses demonstrating that they were significantly, positively related with depression and anxiety. This result could be accounted for by the fact that the regression analyses identified only the unique variance related to each of the relationships, whereas the zero order correlations show the total variance, including both unique and shared variance (Wang & Kim, 2010).

Table 6

Summary of hierarchical regression analysis of maladaptive perfectionism, self-compassion, and emotional approach coping as predictors of anxiety (HSCL25-A=Anxiety)

Variable	R^2	ΔR^2	F	df	p	B	$SE B$	β	p
Step 1									
Demographics	.04	.04	5.09	2, 252	.01				
Gender						.11	.06	.11	.08
Education Level						-.14	.06	-.14	.02
Step 2									
Maladaptive Perfectionism	.31	.27	16.07	5, 247	.00				
FMPS-PE						-.12	.08	-.13	.10
FMPS-PC						.08	.08	.08	.30
FMPS-CM						.25	.08	.25	.00
FMPS-DA						.17	.08	.17	.03
APS-R-D						.21	.07	.21	.00
Step 3									
Self-Compassion	.40	.09	12.30	6, 241	.00				
SCS-SK						.13	.08	.13	.12
SCS-SJ						.05	.09	.05	.54
SCS-CH						.09	.08	.09	.27
SCS-I						.11	.08	.11	.18
SCS-M						-.21	.08	-.21	.02
SCS-OI						.19	.09	.19	.03
Step 3									
Emotional Approach Coping	.40	.00	10.70	2, 239	.56				
EACS-EP						-.01	.06	-.01	.94
EACS-EE						.06	.06	.06	.30

Note. FMPS=Frost Multidimensional Perfectionism Scale, FMPS-PE =Parent Expectation, FMPS-PC=Parent Criticism, FMPS-CM=Concern for Mistake, FMPS-DA=Doubt for Action, APS-R-D=Almost Perfect Scale-Revised, Discrepancy, SCS= Self-Compassion Scale, SCS-SK=Self-Kindness, SCS-SJ=Self-Judgment, SCS-CH=Common Humanity, SCS-I=Isolation, SCS-M=Mindfulness, SCS-OI=Over-Identification. EACS=Emotional Approach Coping Scale, EACS-EP=Emotional Processing, EACS-EE=Emotional Expression.

Table 7

Summary of hierarchical regression analysis of maladaptive perfectionism, self-compassion, and emotional approach coping as predictors of anxiety (HSCL25-D=Depression)

Variable	R^2	ΔR^2	F	df	p	B	$SE B$	β	p
Step 1									
Demographics	.04	.04	5.63	2, 252	.00				
Gender						.19	.06	.19	.00
Education Level						-.06	.06	-.14	.35
Step 2									
Maladaptive Perfectionism	.38	.34	21.39	5, 247	.00				
FMPS-PE						-.05	.07	-.05	.45
FMPS-PC						.10	.07	.10	.17
FMPS-CM						.13	.07	.13	.07
FMPS-DA						.14	.07	.14	.05
APS-R-D						.35	.07	.35	.00
Step 3									
Self-Compassion	.49	.11	17.58	6, 241	.00				
SCS-SK						.15	.08	.15	.04
SCS-SJ						.04	.09	.04	.63
SCS-CH						.06	.07	.06	.45
SCS-I						.27	.08	.27	.00
SCS-M						-.23	.08	-.23	.00
SCS-OI						.10	.09	.10	.20
Step 3									
Emotional Approach Coping	.49	.01	15.38	2, 239	.35				
EACS-EP						-.05	.05	-.05	.31
EACS-EE						.04	.06	.04	.52

Note. FMPS=Frost Multidimensional Perfectionism Scale, FMPS-PE =Parent Expectation, FMPS-PC=Parent Criticism, FMPS-CM=Concern for Mistake, FMPS-DA=Doubt for Action, APS-R-D=Almost Perfect Scale-Revised, Discrepancy, SCS= Self-Compassion Scale, SCS-SK=Self-Kindness, SCS-SJ=Self-Judgment, SCS-CH=Common Humanity, SCS-I=Isolation, SCS-M=Mindfulness, SCS-OI=Over-Identification. EACS=Emotional Approach Coping Scale, EACS-EP=Emotional Processing, EACS-EE=Emotional Expression.

Mediation Analysis

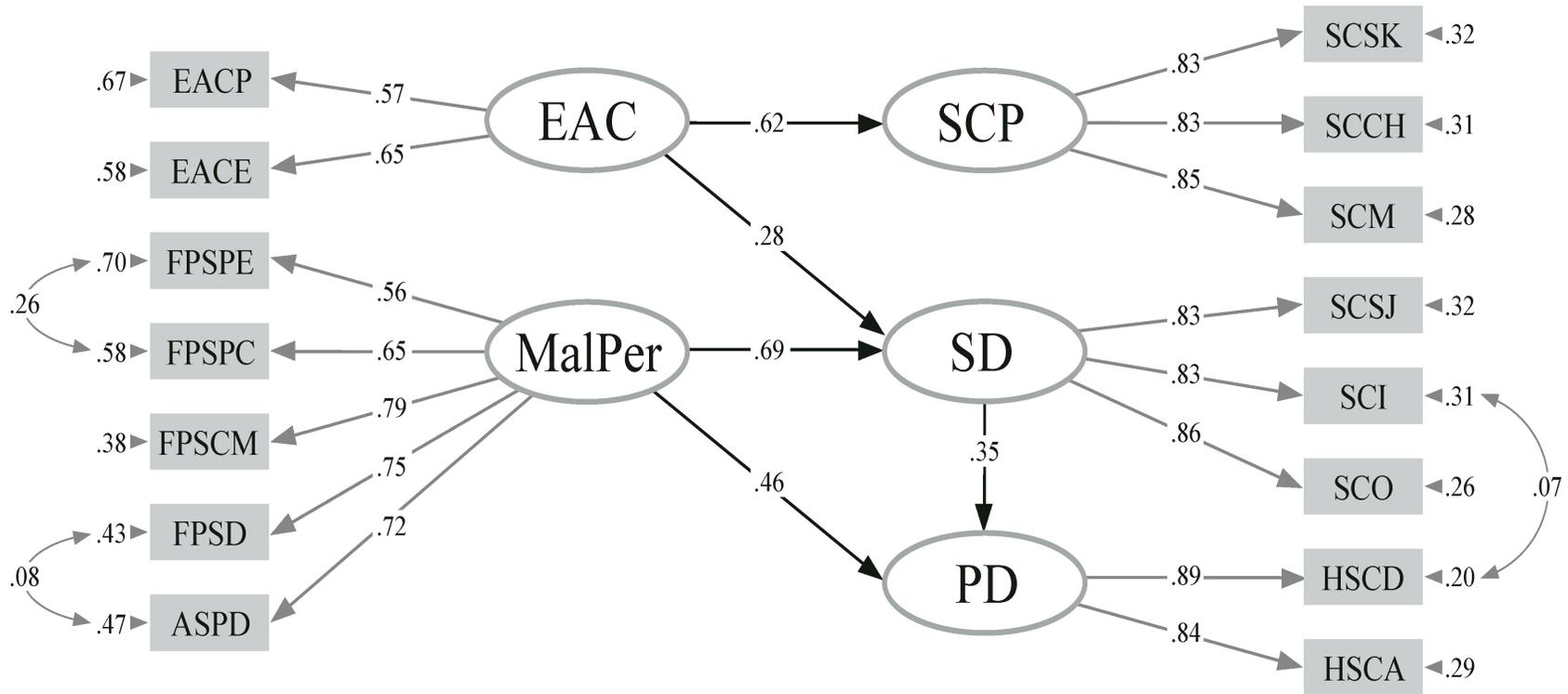
Originally, the current study was intended to investigate the roles of self-compassion and emotional approach coping in mediating the relationship between maladaptive perfectionism and psychological distress. After examining the correlations among the variables and performing hierarchical regression analyses, the original model needed to be revised for several reasons. First, as discussed above, the two emotional approach coping scales (EAC-EP and EAC-EE) were not statistically correlated with psychological distress (HSCL25-A and HSCL25-D). Also, the above hierarchical regression analyses showed that the emotional approach coping variables were not statistically significant predictors for either depression or anxiety. These results violate the assumption that a mediator should have significant relationship with an outcome variable (Baron & Kenny, 1986; Holmbeck, 1997). Hence, emotional approach coping could not serve as a mediator; thus, it was included as an exogenous variable in the analyses.

Second, as discussed above, the patterns for correlations between self-compassion variables were not consistent with existing literature (Neff, 2003b), because the Self-Compassion subscales with positive aspects (e.g., self-kindness) had no significant negative relationships with the counterparts with negative aspects (e.g., self-judgment). Thus, a latent variable for self-compassion could not be derived for both the positive SCS scales and the negative SCS scales due to the weak associations among them. In this regard, an exploratory factor analysis for the Self-Compassion Scale was conducted. According to the results from the Principal Axis Factor Analysis (Table 10), two factors emerged: the Self-Compassion factor (i.e., Self-Kindness, Common

Humanity, and Mindfulness), and Self-Disrespect factor (i.e., Self-Judgment, Isolation, and Over-Identification). Table 11 shows the correlations between the latent variables. The results also support that either Self-Compassion factor or emotional approach coping are not associated with psychological distress.

Taken together, the original model was revised to incorporate two Self-Compassion factors as separate mediators in the relationship between maladaptive perfectionism and psychological distress, with Emotional Approach Coping as an exogenous variable (See Figure 1). In addition, given the strong correlations between several indicators, the following residual paths were added to the revised model: a) parental expectation and parental criticism, b) doubt for action and discrepancy, and c) isolation and depression. This exploratory model was tested employing Structural Equation Modeling (SEM) with *R* software. The results indicated an acceptable fit to the data, $\chi^2(78)=206.88$, $p < .001$, CFI=.93, NNFI=.91, RMSEA=.08 (95% CI: .07, .09), based on the criteria for fit indices recommended by Brown and Cudeck (1993) and Bryne (2001). This model also indicated Self-Disrespect partially mediated the relationship between maladaptive perfectionism and psychological distress.

Figure 2. A revised conceptual model for Structural Equational Modeling



Note. MalPer: Maladaptive Perfectionism, EAC: Emotional Approach Coping, SC: Self-Compassion, SD: Self-Disrespect, PD: Psychological Distress. FPSPE=Parent Expectation, FPSPC= Parent Criticism, FPSCM=Concern for Mistake, FPSD=Doubt for Action, APSD=Almost Perfect Scale-Revised, Discrepancy, SCK=Self-Kindness, SCJ=Self-Judgment, SCC=Common Humanity, SCI=Isolation, SCM=Mindfulness, SCO=Over-Identification. EACP=Emotional Processing, EACE=Emotional Expression, HSCA= Hopkins Symptom Checklist-25-Anxiety, and HSCD= Hopkins Symptom Checklist-25-Depression

Table 8
Principal Axis Factor Analysis Loading for Self-Compassion Scale (SCS)

Subscales	Factor loading	
	1	2
Self-Kindness	.81	-.02
Self-Judgment	.82	.07
Common Humanity	.87	-.05
Isolation	.01	.86
Mindfulness	-.09	.84
Over-Identification	.08	.83

Table 9
Correlations Among Latent Variables for the Measurement Model

Latent Variable	1	2	3	4	5
1. Maladaptive Perfectionism	-				
2. Self-Compassion	-.15	-			
3. Self-Disrespect	.68	.06	-		
4. Emotional Approach Coping	-.25	.63	.10	-	
5. Psychological Distress	.69	-.04	.67	-.07	-

Moderation Analysis

The above structural equation modeling shows that Self-Disrespect served as a partial mediator. Thus, an exploratory analysis was performed to assess if Self-Disrespect moderated the relationship between maladaptive perfectionism and psychological distress. Prior to conducting a hierarchical regression analyses, a maladaptive perfectionism variable was computed by summing the following subscales: parent expectations (FMPS-PE), parent criticism (PC), concern for mistakes (FMPS-CM), doubt for action (FMPS-DA), and discrepancy (APS-R-D). Discrepancy (APS-R-D) was included given its strong correlations with the FMPS's subscales, and its unique

explanation for maladaptive perfectionism, focusing on the huge gaps between the ideal self and actual self.

Self-Disrespect variable amounted to the sum of the SCS subscales with negative aspects, including self-judgment (SCS-SJ), isolation (SCS-I), and over-identification (SCS-OI). Psychological distress was assessed by HSCL25 that combined the scores of two subscales, anxiety (HSCL25-A) and depression (HSCL25-D). In order to reduce multicollinearity, all the variables including predictors and a moderator were standardized (Aiken & West, 1991; Frazier et al., 2004). The standardized variables for gender and education level were entered in the first step of the regression to control their main effect on the measurement variables, as discussed above. In Step 2, the predictor variable, maladaptive perfectionism, and the moderator variable, Self-Disrespect, were entered. Lastly, the interaction variable (maladaptive perfectionism x Self-Disrespect) was entered.

As shown in Table 11, after controlling for gender and education level, maladaptive perfectionism and Self-Disrespect contributed the unique variance in psychological distress ($\Delta R^2 = .41, p < .001$). The additional variance accounted for by the interaction variable between maladaptive perfectionism and Self-Disrespect was statistically significant ($\Delta R^2 = .013, p = .02$). Thus, the result indicated a moderating role of Self-Disrespect on the relationship between maladaptive perfectionism and psychological distress. As illustrated in Fig. 3, these slopes are not parallel to each other. This indicated that a high level of Self-Disrespect intensified the association between maladaptive perfectionism and psychosocial distress, whereas a low level of Self-

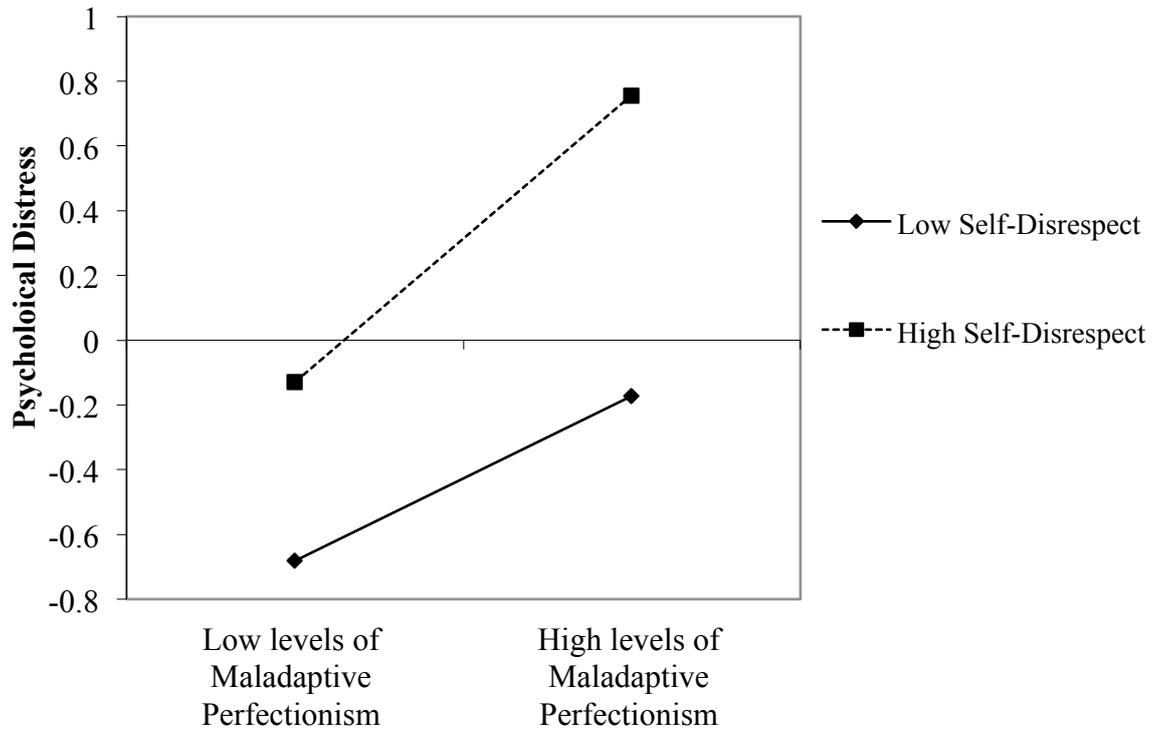
Disrespect buffered this association among those participants who reported a high level of maladaptive perfectionism

Table 10

Summary of hierarchical regression analysis of Self-Disrespect, as a moderator of psychological distress

Variable	R^2	ΔR^2	F	df	p	B	$SE B$	β	p
Step 1 - Demographics	.04	.04	5.79	2, 252	.00				
Gender						.16	.06	.16	.01
Education Level						-.10	.06	-.10	.12
Step 2 - Main Effect	.45	.41	51.09	2, 250	.00				
Maladaptive Perfectionism						.36	.06	.36	.00
Self-Disrespect						.36	.06	.36	.00
Step 3 - Interaction	.46	.01	42.89	1, 249	.02				
Maladaptive Perfectionism X Self-Disrespect						.09	.04	.12	.02

Figure 3: Plot of significant maladaptive perfectionism x Self-Disrespect interaction



Chapter 5

Discussion

Existing literature has linked maladaptive perfectionism to psychological distress (Axtell & Newlon, 1993; Broday, 1988; Hamilton & Schweitzer, 2000; Hewitt & Dyck, 1986; Hewitt & Flett, 1991; Preusser, Rice, & Ashby, 1994). The objective of the present study was to extend this research by exploring this link among East Asian international undergraduate and graduate students. Furthermore, this study attempted to identify possible psychological constructs that might mediate and moderate the relationship between maladaptive perfectionism and psychosocial distress. Based on a critical review of literature, it was hypothesized that self-compassion and emotional approach coping might serve as mediators and moderator between maladaptive perfectionism and psychological distress. Considering that the present study was the first one to investigate self-compassion and emotional approach coping among East Asian international students, the nature of this study was exploratory.

Prior to discussing the major findings of this study, it is worthwhile to pay attention to the results from the research analysis. The results revealed that gender differences in emotional approach coping, psychological distress, and self-compassion. Female students were more likely than male counterparts to engage in processing and expressing emotions in dealing with stress, which is consistent with previous empirical studies (Berghuis & Stanton, 2002; Stanton et al, 2000). Likewise, East Asian international female students reported greater anxiety and depression than male counterparts. This might be accounted for by the higher prevalence of internalizing disorders such as depression or anxiety among women. Female adults are 50% more

likely than men to experience a mood disorder over their life time, and 60 % more likely than men to experience anxiety disorder (Kessler, Berglund, Demler, Jin, & Walters, 2005). One possible explanation is that females in general were more willing than males to admit to psychological vulnerability such as depression and anxiety. Furthermore, the present sample of East Asian international female students are more prone than their male counterparts to Self-Disrespect such as self-judgment, isolation, and over-identification. Neff (2003b) found the same pattern among American college students, and linked it to her past research results that found that women are more susceptible to self-criticism and rumination than men (Leadbeater et al., 1999; Nolen-Hoeksema et al., 1999).

The findings of the present study also revealed differences between undergraduate and graduate East Asian international students in terms of the level of parental expectation and anxiety. It appears that undergraduate students are more likely than graduate students to report greater parental expectations. Perhaps, undergraduate students are still undergoing individuation and separation process from their parents as compared with graduate students. Thus, undergraduate students seem more susceptible than graduate students to their parents' high standards and expectations, by internalizing them. This hypothesis should be explained in future studies. Moreover, undergraduate students endorsed higher levels of anxiety than graduate students. Considering their cognitive developmental stage, undergraduate students are more likely to exhibit cognitive distortions such as overgeneralization, all-or-nothing thinking, or emotional reasoning (Perry, 1968). In addition, they may experience greater uncertainty and

ambiguity for the future, particularly in terms of their career, than graduate students. Taken together, such factors might contribute to this greater vulnerability.

In examining the correlates between measures, as expected and consistent with other research, there was a robust association of positive correlations between maladaptive perfectionism and psychological distress. Self-Disrespect, such as self-judgment, isolation, and over-identification, was positively associated with anxiety and depression, consistent with the previous empirical findings (Mills, Gilbert, Bellew, McEwan, & Gale, 2007; Ying, 2009). The literature also suggests that Self-Compassion, such as self-kindness, common humanity, and mindfulness, are significantly, inversely correlated with depression and anxiety (Mills et al., 2007; Ying, 2009). This is somewhat inconsistent with the findings from the current study. In the present study, self-kindness and common humanity were not related to depression and anxiety. However, in the present study, mindfulness was negatively associated with depression and anxiety.

Neff (2003b) asserted that self-kindness, common humanity, and mindfulness are not mutually exclusive with self-judgment, isolation and over-identification; however Neff (2003b) found that they were significantly, negatively associated with this counterparts. For instance, self-kindness and self-judgment were not mutually exclusive, indicating that individuals with a high level of self-kindness do not necessarily have a low level of self-judgment. However, those who tend to be self-kind are likely to be less self-judgmental. The results from the present study revealed that the positive aspects of self-compassion (self-kindness, common humanity, and mindfulness) were not related with these counterparts with negative aspects (self-judgment, isolation and over-

identification). Thus, it may appear more salient among East Asian international students that the positive and negative aspects of self-compassion are not mutually exclusive. It indicates that among East Asian international students, individual who scored high on the positive aspects of self-compassion can also be self-critical, feel isolated, or over-identify with their feelings and thoughts. Taken together, due to the non-significant association between the positive and negative aspects of self-compassion, an exploratory factor analysis was conducted and yielded two separate factors: Self-Compassion, and Self-Disrespect.

Contrary to expectations and the previous literature, emotional approach coping was not significantly correlated with anxiety and depression with one exception in emotional expression, one of emotional approach coping, had a significant but small correlation with depression. A number of studies showed negative associations between emotional approach coping and psychological distress such as depression or anxiety (Austenfeld, Paolo, & Stanton, 2006; Broderick, Junghaenel, & Schwartz, 2005; Marques et al., 2009; Smith, Lumley, & Longo, 2002). Most of the preexisting studies on emotional approach coping and psychological distress were conducted in the U.S., although there were several cross-cultural studies. Based on the review of the research, emotional approach coping has not been studied with Asians, not to mention East Asian international students. As a result, despite the desirable internal consistency in the present study, it is questionable whether the measurement for emotional approach coping, EACS, is psychometrically sound and applicable to a East Asian international student population. It is also plausible that among East Asian international students,

emotional approach coping may not play an adaptive role in reducing psychological distress, due to the potential cultural differences in emotional processing and expression.

In this regard, it is important to consider existing literature on Asians' attitudes toward emotions. A line of research documents that Asians tended to be reserved and reluctant to express emotions (Kim, Atkinson, & Yang, 1999; Leong, 1992; Sue & Sue, 2003; Uba, 1994). Yet, several empirical studies found that both Asian American and Korean international students perceived counselors as more competent when they emphasized emotional expression in sessions rather than cognitive processes (Kim, Li, & Liang, 2002; Seo, 2010). Wang and Kim (2010) also found that the value of emotional self-control was negatively associated with counseling process, implying the importance of emotional expression in counseling. Given these mixed findings on Asians' attitudes toward emotions, it is unclear how emotions may serve to function as a method of coping with distress among Asian and East Asian international students. Thus, further research needs to clarify the adaptability of emotions as a coping strategy for this population. In sum, in the current study, given the non-significant association between emotional approach coping and psychological distress, emotional approach coping was found to be neither a mediator nor moderator, as opposed to the hypotheses.

Given that some of the preliminary findings did not support this investigator's conceptualization, an exploratory analysis was conducted to test our main hypotheses. First, the extent to which maladaptive perfectionism, self-compassion, and emotional approach coping contributed unique and shared variance in predicting psychological distress was examined. The results of the current study showed that maladaptive perfectionism factors contributed significant variance in predicting both anxiety and

depression for the East Asian international student participants. These East Asian international students with high maladaptive perfectionism tended to suffer greater psychological distress including anxiety and depression. Such a finding confirmed the hypothesis and is consistent with the existing literature. As discussed previously, Wei et al. (2007) demonstrated that Chinese international students reported more depressive symptoms when manifesting a high level of maladaptive perfectionism than those with a low level of maladaptive perfectionism.

Although no specific hypothesis about the relationship between parental influence in maladaptive perfectionism and psychological distress was generated in this study, it is noteworthy that parental expectation and criticism alone did not account for unique variance in anxiety and depression. These findings are counterintuitive considering Asian parents' high aspirations for and emphasis on their children's educational and career attainment (Chao, 1994; Crystal et al., 1994). Perhaps, it is possible that East Asian international students might experience less maladaptive perfectionism involving parents than expected. Yet, given their cultural values and contexts rooted in Confucianism which values filial duty, it is also plausible that East Asian international students might take for granted their parents' high expectations and criticism. This, in turn, might lead to their decreased sensitivity and increased tolerance for parental expectation and criticism. Another explanation is that although parental support was not assessed in this study, it might serve as a protective factor for distress among East Asian international students. This hypothesis is supported by Yoon and Lau's study (2003) that parental support can serve as a buffer from distress related to parental expectation and criticism among Asian American college students.

Along with maladaptive perfectionism, the regression analyses revealed that self-compassion itself accounted for significant and unique variance in the prediction of psychological distress including anxiety and depression among the East Asian international students. These results indicate that East Asian international students who are compassionate to themselves are likely to experience fewer anxiety and depressive symptoms than students with low self-compassion. These findings also supported the hypothesis and are congruent with a number of empirical studies documenting the relationships between self-compassion and psychological distress (Neff, 2003a; Neff, 2003b; Neff, Hsieh, & Dejitterat, 2005; Neff, Kirkpatrick, & Rude, 2007; Neff, Pisitsungkagarn, & Hsieh, 2008; Neff, Rude, & Kirkpatrick, 2007; Neff, & Vonk, 2009; Raes, 2010; Ying, 2009). As opposed to our hypothesis, emotional approach coping did not predict psychological distress; yet, this was expected given its non-significant correlations with anxiety and depression as discussed earlier.

Originally, this investigator sought to examine self-compassion and emotional approach coping as a mediator of the link between maladaptive perfectionism and psychological distress. The current results, however, showed that emotional approach coping was not related to psychological distress, suggesting it did not function as a mediator. Furthermore, the present data supported two factors in the measurement of self-compassion, Self-Compassion and Self-Disrespect. Such findings did not follow the original structural model (Figure 1, p.50); hence, it led to the revision of the model. The exploratory structural equation analysis partially supported the meditational hypothesis. As presented in Figure 2 (p.74), Maladaptive perfectionism and depressive

symptoms were related, and the indirect effect of maladaptive perfectionism on psychological distress through Self-Disrespect was significant.

On the other hand, maladaptive perfectionism did not relate to psychological distress through Self-Compassion. Therefore, Self-Disrespect may be central in explaining why East Asian international students high in maladaptive perfectionism get depressed and anxious. Specifically, East Asian international students who suffer from unrealistic high standards, concern about mistakes, doubt their actions, and have high parental expectation and criticism appear more vulnerable to depression and anxiety. Given the correlational nature of this study, conclusion about causality cannot be made. A summary of all their thoughts and behaviors are antithetical to self-compassion (i.e., self-judgment, isolation, and over-identification). Thus, the results suggest that East Asian international students who demonstrate maladaptive perfectionism can alleviate psychological distress, by learning to become less self-critical and socially withdrawn, and not over-identifying with negative emotions and thoughts.

Self-Disrespect as a potential moderator in maladaptive perfectionism and psychological distress was also explored, and the significant two-way interaction supported that Self-Disrespect served as a moderator. The finding suggests Self-Disrespect exacerbated the impact of maladaptive perfectionism on psychological distress. Figure 3 shows that there is a strong association between maladaptive perfectionism and psychological distress with high levels of Self-Disrespect. In other words, East Asian international students with maladaptive perfectionism seem to suffer from greater psychological distress when they tend to be more self-judgmental, isolated, and ruminate. On the other hand, low level of Self-Disrespect buffered the negative

impact of maladaptive perfectionism on psychological distress. Thus, East Asian international students with low level of Self-Disrespect are less likely to suffer from psychological distress, even when they demonstrate a high level of maladaptive perfectionism. Potential interpretation for these results is that low level of Self-Disrespect can be conceptualized as another manifestation of self-compassion, as supported in the literature (Gilbert & Irons, 2005; Neff, 2003b). Thus, those who tend to be self-compassionate by not engaging in self-judgment, isolation, and over-identification can be psychologically resilient despite their struggle with unrealistically high standards, concerns for mistakes, doubt for actions, and parental expectation and criticism.

Limitations and Future Research Recommendations

When interpreting the present findings, it is important to acknowledge the limitations of the study. First of all, this is the first exploratory study to investigate the roles of self-compassion and emotional approach coping in the relationship between maladaptive perfectionism and psychological distress among East Asian international students. As a result, caution is needed in interpreting the results of the current study and further research is needed to replicate the present study to support these findings. In particular, it is necessary to further examine the psychometric properties of the instruments used in the current study for East Asian international students, particularly the measurements for self-compassion and emotional approach coping. These two measurements demonstrated adequate reliabilities in the present sample and they have been used in several cross-cultural studies; however, their validity and reliability for East Asian international students have not been thoroughly examined. Moreover, self-

compassion and emotional approach coping can manifest differently in different cultural contexts (Durak & Senol-Durak, 2011; Neff, Pisetungkagarn, & Hsieh, 2008); hence, this investigator underscore the need for further conceptual and empirical advancements in the instruments of self-compassion and emotional approach coping with East Asian international students.

The present sample consisted of different ethnic groups. Although the sample was predominately Chinese and Korean international students, the composition of the sample seems to reflect the current body of East Asian international students in the U.S. (Institute of International Education, 2011). Thus, the results of the current study can be generalized to a population of East Asian international students. Yet, it should be noted that the findings may be more applicable to Chinese and Korean students, rather than other ethnic groups, such as Japanese and Taiwanese students who were underrepresented in the sample. Another important caveat is that due to the heterogeneous sample, the measurements were in English rather than translated into different languages for each ethnic group. Most of the participants reported that they were fluent in English, and the meanings for idioms and colloquial expressions unfamiliar to international students were provided. However, given that English was their second language, it is still possible that some participants might have had difficulty fully understanding the questions in the measurements.

Along with the potential differences in the different ethnic groups among East Asian international students, future research projects could delve more into the impact of gender on the meditational model in this study. Gender differences were found in self-compassion, emotional approach coping, and psychological distress. The impact of

gender differences in the regression analyses was controlled. However, the size of sample for each gender was relatively small, so it was not possible to examine separate structural models for each gender in identifying mediators. Another limitation is that the number of female participants (61.6%) in the current study outnumbered the male counterparts. It should also be taken into account that the current study assessed only depressive and anxiety symptoms for psychological distress which female participants endorsed more, consistent with the higher prevalence rate of depression and anxiety for women (Kessler, Berglund, Demler, Jin, & Walters, 2005). Thus, this study is limited with respect to the assessment of psychological distress that men typically experience, such as anger, aggression, and substance abuse. Taken together, one should be cautious in applying the present findings to a population with East Asian male students.

On a related note, because the outcome variable of this study was psychological distress, it is plausible that Self-Disrespect (self-judgment, isolation, and over-identification) showed a robust association with the outcome, compared with self-compassion (self-kindness, common humanity, and mindfulness). Conversely, building on the empirical studies that supported the positive, strong association between self-compassion and psychological well-being (Neff et al., 2007; Neff et al., 2008), it is worthwhile to investigate the impact of self-compassion on positive psychological outcomes (e.g., life satisfaction and well-being) with East Asian international students. Apart from psychological distress, considering the critical emphasis on academic attainment for this population, future studies are needed to investigate academic outcomes (e.g., grade point average, timely progress toward graduation, and retention), in terms of maladaptive perfectionism and self-compassion. In addition to examining

other outcome variables, it would be useful to test other mediators identified in the previous literature with East Asian international students, such as coping styles (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000), or social support (Sherry, Law, Hewitt, Flett, & Besser, 2008).

As with any nonexperimental, cross-sectional study, the findings cannot imply validated casual inference, although structural equation modeling is thought to provide tentative theoretical casual relationships among variables. In addition, the moderate sample size may have limited statistical power to detect effects. These results are solely based on self-report instruments. Given that every participant completed the instruments in the same order, sequence effects might have occurred as a confound. Additionally, there was no check to detect inattentive or random responding to the survey, or social desirability. Regarding self-reports, participants may be likely to either underreport or over-report for items that assess negative or dysfunctional aspects, such as maladaptive perfectionism or psychological distress.

Implications for Counseling

With regard to implications for practice, the findings of this study underscore that maladaptive perfectionism was a strong predictor for psychological distress among East Asian international students. Thus, counselors and other helping professionals may need to be alert to the potential for maladaptive perfectionism in working with East Asian international students. In particular, when they report psychological distress, such as anxiety and depression, it is important to assess the impact of maladaptive perfectionism on their level of distress. On the other hand, it is important for counselors to differentiate adaptive perfectionism from maladaptive perfectionism, given that

adaptive perfectionism can aid students in fulfilling their potentials, and educational aspirations in a healthy and realistic manner (Rice & Mirzadeh, 2000).

When detecting maladaptive perfectionism, counselors need to assist students in developing awareness of how their unrealistic and excessively high standards can contribute to their high level of distress. As the literature suggests, students with maladaptive perfectionism are more likely to suffer from a sense of inadequacy and shame (Ashby, Rice, & Martin, 2006; Blatt, 1995). In addition, it might be difficult to establish a therapeutic relationship with students with maladaptive perfectionism, due to their heightened sensitivity to perceived criticism (Rice, & Lopez, 2004). Most of all, East Asian international students may be more reluctant to discuss personal concerns in counseling due to cultural stigma and language barriers (Mori, 2000). Thus, in developing a therapeutic alliance with East Asian international students, it is critical for counselors to be nonjudgmental, empathetic, and supportive, which will help students to feel accepted and validated. In addition, it is also important to respect and normalize their resistance and ambivalence for counseling by demonstrating cultural sensitivity.

Another possible clinical intervention is to target the development of self-compassion among East Asian international students who suffer from maladaptive perfectionism and psychological distress. The findings of this study suggest that maladaptive perfectionism was indirectly related to maladaptive perfectionism through Self-Disrespect (i.e., self-judgment, isolation, and over-identification). In addition, Self-Disrespect may worsen psychological distress for East Asian students with a high level of maladaptive perfectionism. Therefore, interventions that lower Self-Disrespect may lead to the reduction of psychological distress. The literature also asserts that the first

step to increase self-compassion is to recognize the detrimental and harmful impact of self-judgment, isolation, and over-identification on one's mental health (Gilbert & Irons, 2005). In sum, it is important for counselors to educate East international students about the importance of not being self-critical, socially withdrawn, and ruminative, as a way to be compassionate to themselves. In conjunction with such psychoeducation, Cognitive Behavioral Therapy (CBT) can be utilized to identify and correct irrational thoughts that fuel self-judgment. For instance, due to their contingent sense of self-worth and conditional self-acceptance (Ellis, 2002, Flett, Hewitt, Oliver, & Macdonald, 2002), individuals with maladaptive perfectionism are susceptible to irrational belief and interpersonal sensitivity. Consequently, CBT may serve as an effective tool to reduce irrational thoughts, which in turn can teach students not to engage in self-judgment.

In addition to decreasing self-judgment through CBT, counselors and international student offices need to pay attention to the development and implementation of the programs that provide East Asian international students with opportunities to develop social support, and increase social connectedness. Being apart from their home countries, international students are more likely to suffer from isolation, as evidenced in the current study and in previous literature (Ying, 2009; Ying & Han, 2006). In particular, counselors need to educate faculty, academic advisors, and other student service staff to assist them in developing more awareness for unique needs and concerns that East Asian international students face, and providing them with social support with multicultural sensitivity.

Sandhu (1995) emphasized that given the underutilization of counseling services among international students, counselors should be proactive in collaborating with

international student and faculty offices and English as a Second Language (ESL) programs to publicize and promote counseling services. In addition, through collaboration with international student and scholar offices and ESL programs, counselors can contribute to developing programs that enhance a strong sense of community among East Asian international students and other international students. For example, counselors can provide support groups for international students to assist them in the adjustment to a new culture. In addition, given the stigma for seeking help for mental health, cross-cultural discussion groups consisting of both international and American students may be effective in reaching out to more international students. In addition, counseling centers can support and sponsor social events for international students, which also can be opportunities to make counseling services more visible and accessible.

Lastly, it is also important to educate international students to promote healthy and adaptive coping strategies in managing their psychological distress. In particular, as the present findings suggest, East Asian international students can experience greater psychological distress by over-identifying with their negative thoughts and feelings. Mindfulness, a component of self-compassion, has been proven to be effective in emotional regulation and widely used in different therapeutic approaches such as Dialectical Behavioral Therapy (DBT; Linehan & Dimeff, 2001) and Acceptance and Commitment Therapy (ACT; Hayes, 2002). Hence, counselors can teach East international students to practice mindfulness, as a way to reduce emotional distress and to promote self-compassion. In addition, counselors can incorporate mindfulness in developing outreach programs tailored to international students. Counselors also can

provide weekly meditation sessions in international student and faculty offices to attract more international students.

Conclusion

Despite several limitations, the present study is the first study to explore the potentially mediating and moderating roles of self-compassion and emotional approach coping in the relationship between maladaptive perfectionism and psychological distress among East Asian international students. Maladaptive perfectionism was a strong predictor of psychological distress among respondents. In addition, Self-Disrespect, engaging in self-judgment, isolation, and over-identification, served as both a mediator and moderator in maladaptive perfectionism and psychological distress among the sample of East Asian international students. In closing, it is hoped that these findings can contribute to increased understanding of the roles of maladaptive perfectionism, self-compassion, and emotional approach coping in treating psychological distress among East Asian international students.

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Appendix A: Consent Form

Consent Form

You are invited to be in a research study of the relationship between self-attitudes and emotional experiences. You were selected as a possible participant because you are an East Asian international student. We ask that you read this form before agreeing to be in the study. This is the dissertation study of Hweon Seo, MA., in the Department of Educational Psychology at the University of Minnesota.

Background Information:

The purpose of this study is to investigate the relationship between self-attitudes and emotional experiences in East Asian international students in the United States. The findings of this study will help develop programs and interventions to assist East Asian international students in adjusting to the United States.

Procedures and Compensation:

Participation in this study is voluntary and you may withdraw at any time without penalty. It will take you approximately 15-20 minutes. You will be asked to answer a number of questions about your experiences related to your self-attitudes and emotional experiences. *After the completion of the questionnaires, you will have the option of providing an email address to receive a \$5 Starbucks gift card.* The gift card will be delivered through your email within two weeks after you completed the survey. The email address will only be used for the purpose of delivering a gift card and the email address will be deleted following the completion of the study.

Risks and Benefits of Being in the Study:

Any risk or discomfort from participating in this research study is minimal. However, there is a possibility that you might feel uncomfortable when answering some of the questions. Your participation will help gain more understanding of self-attitudes and emotional experiences among East Asian international students. There is no direct benefit for participating in this study.

Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we

will not include any information that will make it possible to identify you. Research records will be stored securely and only researchers will have access to the records.

Resource:

If your participation in this study raises any concern, a mental health resource is available. University Counseling & Consulting Service: <http://www.uccs.umn.edu>

Contacts and Questions:

The researcher conducting this study is Heweon Seo, and this research study is under the supervision of Dr. Thomas Skovholt, Professor of Educational Psychology at the University of Minnesota, Twin Cities. If you have questions later, **you are encouraged** to contact us by email, seox0032@umn.edu , and skovh001@umn.edu or phone, (612) 239-3841 and (612) 625-3573. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

Informed Consent : November 19, 2010.

IRB Code Number: 1011P92754

- Yes, I have read the above description and I agree to participate.
- No, I do not want to participate in this survey.

Appendix B: Demographic Questionnaire

1. Are you
 Male
 Female
 Transgender
 Other
2. What is your age? _____
3. Are you an international student?
 Yes
 No
4. Your country of Permanent Residence is

 China
 Japan
 Korea
 Taiwan
 Other
5. Please indicate the length of time you have been in the U.S.

_____ Year (s)
6. You are
 a undergraduate student
 a graduate student
 other
7. How would you rate your overall English language ability?
 excellent
 good
 fair
 poor
8. Your current major(s) is _____
9. What is your GPA (Grade Point Average) in your current program? _____

10. How satisfied are you with your GPA?

- very dissatisfied
- dissatisfied
- neutral
- satisfied
- very satisfied

11. What is your relationship status?

- Single
- Married/domestic partner
- Committed dating relationship
- Separated
- Widowed
- Divorced

12. Do you have children?

- Yes
- No

If so, how many children do you have? _____

13. Do you have a religious affiliation?

- Yes
- No

If yes, please indicate your religious affiliation: _____

Appendix C. Frost Multidimensional Perfectionism Scale (FMPS; Frost, Marten, Lahart, & Rosenblate, 1990)

Respond to each of the items using the scale below to describe your degree of agreement or disagreement with each item.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Concern over Mistakes (CM)					
If I fail at work/school, I am a failure as a person.	1	2	3	4	5
I should be upset if I make a mistake.	1	2	3	4	5
If someone does a task at work/school better than I, then I feel like I failed the whole task.	1	2	3	4	5
If I fail partly, it is as bad as being a complete failure.	1	2	3	4	5
I hate being less than the best at things.	1	2	3	4	5
People will probably think less of me if I make a mistake.	1	2	3	4	5
If I do not do as well as other people, it means I am an inferior human being.	1	2	3	4	5
If I do not do well all the time, people will not respect me.	1	2	3	4	5
The fewer mistakes I make, the more people will like me.	1	2	3	4	5
Personal Standards (PS)					
If I do not set the highest standards for myself, I am likely to end up a second-rate person.	1	2	3	4	5
It is important to me that I be thoroughly competent in everything I do.	1	2	3	4	5
I set higher goals than most people.	1	2	3	4	5
I am very good at focusing my efforts on attaining a goal.	1	2	3	4	5
I have extremely high goals.	1	2	3	4	5
Other people seem to accept lower standards from themselves than I do.	1	2	3	4	5
I expect higher performance in my daily tasks than most people.	1	2	3	4	5

Parental Expectations (PE)

My parents set very high standards for me.	1	2	3	4	5
My parents wanted me to be the best at everything.	1	2	3	4	5
Only outstanding performance is good enough in my family.	1	2	3	4	5
My parents have expected excellence from me.	1	2	3	4	5
My parents have always had higher expectations for my future than I have.	1	2	3	4	5

Parental Criticism (PC)

As a child, I was punished for doing things less than perfect.	1	2	3	4	5
My parents never tried to understand my mistakes.	1	2	3	4	5
I never felt like I could meet my parents' expectations.	1	2	3	4	5
I never felt like I could meet my parents' standards,	1	2	3	4	5

Doubts about Actions (D)

Even when I do something very carefully, I often feel that it is not quite right.	1	2	3	4	5
I usually have doubts about the simple everyday things I do.	1	2	3	4	5
I tend to get behind in my work because I repeat things over and over.	1	2	3	4	5
It takes me a long time to do something "right."	1	2	3	4	5

Appendix D. Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashbly, 2001)

The following items are designed to measure attitudes people have toward themselves, their performance, and toward others. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding.

* This indicates there is an explanation for a word or idiom on the bottom.

	Strongly Disagree	Slightly Disagree	Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
Discrepancy							
I often feel frustrated because I can't meet my goals	1	2	3	4	5	6	7
My best just never seems to be good enough	1	2	3	4	5	6	7
I rarely live up to my high standards	1	2	3	4	5	6	7
Doing my best never seems to be enough	1	2	3	4	5	6	7
I am never satisfied with my accomplishments	1	2	3	4	5	6	7
I often worry about not *measuring up to my own expectations	1	2	3	4	5	6	7
My performance rarely measures up to standards	1	2	3	4	5	6	7
I am seldom able to meet my own high standards for performance	1	2	3	4	5	6	7
I am not satisfied even when I know I have done my best	1	2	3	4	5	6	7
I am hardly ever satisfied with my performance	1	2	3	4	5	6	7
I hardly ever satisfied with my performance	1	2	3	4	5	6	7

I often feel disappointment after completing a task
because I know I could have done better

1

2

3

4

5

6

7

*measure up to: to fulfill (expectations, standards, etc).

Appendix E: Emotional Approach Coping Scale (EACS: Stanton et al. 2000)

We are interested in how people respond when they confront stressful experiences. By "stressful" we mean situations that are difficult or troubling to you, either because they upset you or because it takes considerable effort to deal with them. This questionnaire asks you to indicate what you generally do, feel, think when you experience stressful situations. Please think about what you usually do when you are under a lot of stress.

* This indicates there is an explanation for a word or idiom on the bottom.

	I usually don't this at all	I usually do this a little bit	I usually do this a medium amount	I usually do a lot
Emotional Process				
I take time to figure out what I'm really feeling	1	2	3	4
I *delve into my feelings to get a thorough understanding of them	1	2	3	4
I realize that my feelings are valid and important	1	2	3	4
I acknowledge my emotions	1	2	3	4
Emotional Expression				
I let my feelings come out freely	1	2	3	4
I take time to express my emotions	1	2	3	4
I allow myself to express my emotions	1	2	3	4
I feel free to express my emotions	1	2	3	4

* delve into: to try hard to find out more information about something

Appendix F: Hopkins Symptom Checklist 25

Listed below are some symptoms or problems that people sometimes have. Please read each one carefully and decide how much the symptoms bothered or distressed you **in the last week, including today**. Place a check in the appropriate column.

* This indicates there is an explanation for a word or idiom on the bottom.

	Not at all	A little	Quite a bit	Extremely
Anxiety				
Suddenly scared for no reason	1	2	3	4
Feeling fearful	1	2	3	4
Faintness, dizziness, or weakness	1	2	3	4
Nervousness or shakiness inside	1	2	3	4
Heart pounding or racing	1	2	3	4
*Trembling	1	2	3	4
Feeling tense or *keyed up	1	2	3	4
Headaches	1	2	3	4
*Spells of terror or panic	1	2	3	4
Feeling restless, can't sit still	1	2	3	4
Depression				
Feeling low in energy, slowed down	1	2	3	4
Blaming yourself for things	1	2	3	4
Crying easily	1	2	3	4
Loss of sexual interest or pleasure	1	2	3	4
Poor Appetite	1	2	3	4
Difficulty falling asleep, staying asleep	1	2	3	4
Feeling hopeless about the future	1	2	3	4
*Feeling blue	1	2	3	4
Feeling lonely	1	2	3	4
Thoughts of ending your life	1	2	3	4

Feeling of being trapped or caught	1	2	3	4
Worrying too much about things	1	2	3	4
Feeling no interest in things	1	2	3	4
Feeling everything is an effort	1	2	3	4
Feeling of worthlessness	1	2	3	4

* tremble: shakes slightly, * keyed up: nervous, * spell: a period of time, * feel blue: to feel sad.

Appendix G: Self-Compassion Scale (SCS: Neff, 2003 b)

How I typically act towards myself in difficult times

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

* This indicates there is an explanation for a word or idiom on the bottom.

	Almost Never				Almost Always
Self-Kindness					
I try to be loving towards myself when I'm feeling emotional pain.	1	2	3	4	5
When I'm going through a very hard time, I give myself the caring and tenderness I need.	1	2	3	4	5
I'm kind to myself when I'm experiencing suffering.	1	2	3	4	5
I'm tolerant of my own flaws and inadequacies.	1	2	3	4	5
I try to be understanding and patient towards those aspects of my personality I don't like.	1	2	3	4	5
	1	2	3	4	5
Self-Judgment					
I'm disapproving and judgmental about my own flaws and inadequacies.	1	2	3	4	5
When I see aspects of myself that I don't like, I *get down on myself.	1	2	3	4	5
I'm intolerant and impatient towards those aspects of my personality I don't like.	1	2	3	4	5
I can be a bit cold-hearted towards myself when I'm experiencing suffering.	1	2	3	4	5
Common Humanity					
When things are going badly for me, I see the difficulties as part of life that everyone goes through.	1	2	3	4	5
When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.	1	2	3	4	5
When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	1	2	3	4	5

I try to see my failings as part of the human condition. 1 2 3 4 5

Isolation

When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world. 1 2 3 4 5

When I'm feeling down, I tend to feel like most other people are probably happier than I am. 1 2 3 4 5

When I'm really struggling, I tend to feel like other people must be having an easier time of it. 1 2 3 4 5

When I fail at something that's important to me, I tend to feel alone in my failure. 1 2 3 4 5

Mindfulness

When something upsets me I try to keep my emotions in balance. 1 2 3 4 5

When something painful happens I try to take a balanced view of the situation. 1 2 3 4 5

When I fail at something important to me I try to keep things in perspective. 1 2 3 4 5

When I'm feeling down I try to approach my feelings with curiosity and openness. 1 2 3 4 5

Over-identification

When I'm feeling down I tend to obsess and fixate on everything that's wrong. 1 2 3 4 5

When I fail at something important to me I become consumed by feelings of inadequacy. 1 2 3 4 5

When something upsets me I *get carried away with my feelings. 1 2 3 4 5

When something painful happens I tend to *blow the incident out of proportion.

* get down on someone: to think that somebody is wrong and to criticize them.

* get carried away: lose control of one's feelings.

* blow something out of proportion: exaggerate